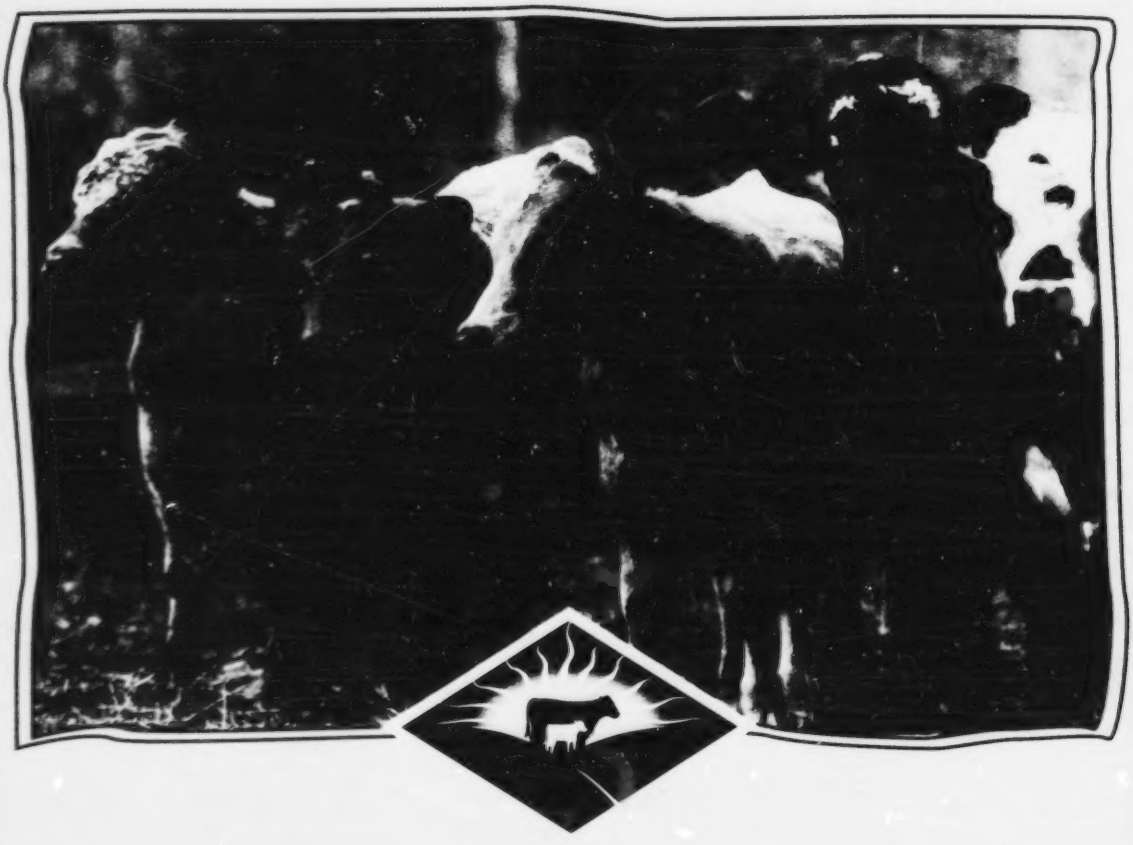

A Range of Opportunities for Growth

Manitoba Beef Prospects is a co-operative initiative of industry and government, created to identify opportunities and develop partnerships in Manitoba's cattle industry.

The co-ordinating committee includes members from government, agribusiness, educational and research institutions.

For more information on Manitoba Beef Prospects, please contact: your local Manitoba Agriculture and Food office or the Winnipeg office at (204) 945-3502

or

Manitoba Cattle Producers Association at (204) 772-4542.

Manitoba Beef Prospects' Coordinating Committee gratefully acknowledges financial support from:

Manitoba Rural Adaptation Council

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Covering New Ground
(A program administered by Manitoba Agriculture and Food)

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A message from the
MINISTER OF AGRICULTURE AND FOOD

As the Minister of Agriculture and Food, I am very pleased with the collaborative efforts of industry and government partners in launching Manitoba Beef Prospects. This cooperative effort highlights the new opportunities in our beef industry and demonstrates the economic viability of its future.

The traditional strength of Manitoba's beef industry is based on our producers' accomplished history of raising quality beef, a practice that began with the arrival of the first European settlers in the early 1800s.

Manitoba's natural landscape provides the basis for continued success. Our vast land area includes rich farmland capable of supporting a sustainable agricultural industry with room for expansion and growth. Our cultivated cropland and native hayland maintain a viable livestock industry.

The launching of Manitoba Beef Prospects is the first step in our effort to increase awareness of the opportunities in the beef industry. Together with the Manitoba Cattle Producers Association (MCPA) and our other industry partners, we will continue to enhance the information and possibilities available to the industry through workshops, seminars and the distribution of materials.

The beef industry in Manitoba is a growing sector that is just beginning to realize its full potential. By working together and building on our natural strengths, we can build on our record of industry excellence and help ensure a prosperous future for all members of the beef industry. Your success will benefit all Manitobans.

Rosann Wowchuk

Rosann Wowchuk

Manitoba
Agriculture
and Food

A message from the
MANITOBA CATTLE PRODUCERS ASSOCIATION

On behalf of the beef cattle producers across this province, the Manitoba Cattle Producers Association is very pleased to have been a partner in the development and launch of Manitoba Beef Prospects. The cooperation from government and industry partners in the development of Manitoba Beef Prospects clearly demonstrates the importance of the beef industry to Manitoba.

The producers of this province have clearly demonstrated time and time again that they are more than willing to embrace new technologies and techniques in the advancement of both their own operations and the beef industry as a whole. This innovative spirit has been evident since the arrival of our forefathers. Manitoba producers have gained the reputation for producing quality beef that is recognized globally.

Manitoba beef producers are truly stewards of the land. Manitoba's cattle producers' livelihoods and quality of life depend on the sustainability of the landscape. Our producers have clearly demonstrated stewardship initiatives that cover a broad scope of managed grazing techniques, innovative watering systems and other endeavors which will allow for expansion of the industry in a sustainable and responsible manner.

The beef industry in Manitoba is a growing industry. Manitoba Beef Prospects is only one of many steps undertaken in an effort to increase awareness of industry opportunities. Together with government and industry partners, we will continue to build our industry to ensure a sustainable and prosperous future for all our members.

Manitoba Cattle Producers Association

Prospects and Opportunities at a Glance

Manitoba Beef Prospects is a cooperative initiative created by industry and government to highlight the natural strengths and opportunities in Manitoba's cattle industry. The objective is to help strengthen the industry by creating new partnerships and a greater awareness of Manitoba's advantages in production and marketing alternatives. It is also anticipated that the initiative will help identify new opportunities and promote investment in Manitoba's cattle industry.

The Beef Prospects coordinating committee includes members from government, agribusiness and educational and research institutions. This publication features statistics, graphical charts and analysis gathered by the committee members to assist in reviewing industry opportunities.

A Positive Outlook

Coinciding with the upturn in the economy during the 1990s, North American beef consumption increased slightly. The increase reversed a trend of the previous two decades that saw a decrease in consumption. In 1998 and 1999,

North American consumption was relatively stable and is expected to continue to be stable at about 13 to 14 million tonnes per year for several years to come.

During the same time, beef inventories in North America have been decreasing. The beef herd in Manitoba has been increasing steadily over the past two decades. Because of this, prices are expected to remain strong over the next few years. Manitoba beef producers are in a position to take advantage of this period of stable demand and higher prices.

In 1998, there were about 1.4 million beef cattle on Manitoba farms. Approximately 502,000 head were marketed. In 1999, the numbers were 1.3 million beef cattle with about 537,000 head marketed. Most of Manitoba's 12,000 beef producers are cow/calf operators. There are almost 250 feedlots in operation in Manitoba, ranging from 80 to 6,500 head. Since 1991, the number of feedlots has increased by about 60, with plenty of room for more.

Removal of subsidies under the *Western Grain Transportation Act* has helped make Manitoba a competitive place to raise cattle as it's now more costly to ship export grain to the coast. Manitoba is beginning to realize it's capacity to produce ample supplies of competitively priced, high-quality feed to support a growing beef industry.

Advances in management techniques and technology have enabled producers to increase beef production while acres under production have remained relatively constant. Fewer people are managing greater numbers of cattle and producing more pounds of beef on the same number of acres.

Resources: Manitoba's Natural Advantages

Beef cattle production is certainly not new to Manitoba. We have a long-standing reputation for top-quality beef that was established early in the past century. Though beef production has been working its way back from a decline of two decades ago, Manitoba has maintained the strong supplier networks, government services and industry associations that support today's beef producers. Competitive wage rates and a pool of skilled workers back opportunities for expansion, particularly in the feeding sector.

Our large, affordable land base consists of cultivated regions and native hay lands that are more productive due to increased mean annual precipitation rates over the Prairie regions farther to the west. Adequate areas of cropland are available near feedlots to incorporate the nutrients from manure. Manitoba also has an abundant supply of good-quality water and a variable climate that is favorable to livestock production.

Manitoba's central location, just 10 to 12 hours by truck away from the major slaughter and processing facilities in Canada and the United States, gives producers in this province superior access to the entire North American market.

Pure-bred operators in Manitoba are leaders in producing some of the top genetics in Canada. Innovative initiatives in the 1960s to import top-producing European breeds have resulted in vigorous crossbred offspring that are renowned in North American feeding circles.

Manitoba is also a leader in genetic evaluation programs to guarantee the selection of the best genetics on the continent. Pure-bred beef producers, private companies and beef breed associations promote and market live cattle, semen and embryos across Canada and around the world. Manitoba producers participate in several industry-wide programs that monitor herd health and ensure quality and safety of the beef they produce for national and international markets.

Building a Sustainable Beef Industry

Competitive annual rates of return on investment capital or assets are supporting industry growth. The return on assets for a typical cow/calf operation averaged 7.2 per cent from 1985 to 1998. Feedlots averaged 12.6 per cent and backgrounding operations averaged 7.7 per cent.

Manitoba producers have a range of marketing opportunities available to them from auction marts to buying stations to sales on video and computer. Marketing to the United States has increased because of higher demand, the relative value of the Canadian dollar and competitive shipping costs.

The economic activity generated within a community by cattle operations stimulates growth in other areas. People employed directly or indirectly by the beef industry spend their income in the community creating additional jobs and economic activity. Research shows that one dollar of economic activity in the beef industry generates another three dollars of economic activity in the local community.

Financing a Growing Industry

The beef industry requires long-term capital for land, infrastructure facilities, equipment and breeding stock. Short-term capital is needed for financing cattle inventory and production activities.

The large amounts of capital needed to expand or diversify are greater than most producers can provide from retained earnings. As a result, other sources of capital are required.

A number of private and public financial institutions provide debt capital to Manitoba beef producers. These institutions include chartered banks and trust companies, credit unions and caisses populaires, the Manitoba Agriculture Credit Corporation and the Farm Credit Corporation.

Both Manitoba and the federal government have developed programs to help the financial community in providing debt capital. A well-managed cow/calf operation can generally service 50 to 60 per cent debt capital while a feedlot can function with 60 to 70 per cent debt capital.

Industry Support Sources

Provincial and federal governments, education and research facilities, industry associations and private suppliers provide a wide range of support programs and services. They range from extension offices, veterinary services and nutritional programs to bull testing stations and marketing expertise.

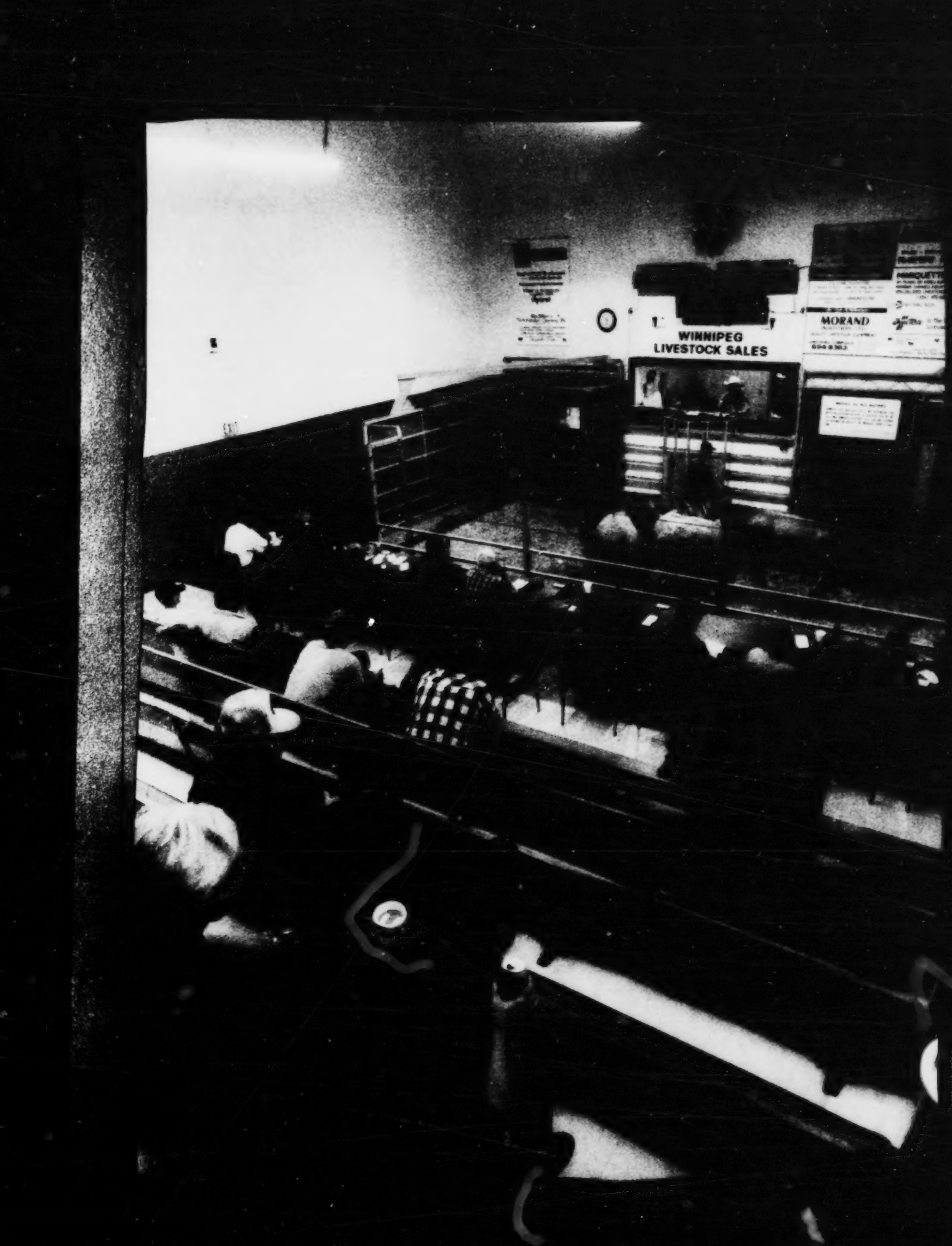
Descriptions of these support programs and services are provided in this publication along with addresses and telephone numbers for more information. The extent of the list indicates the strength of the support network available to Manitoba producers and the commitment of all industry partners.

Acknowledgements:

The Beef Prospects' Coordinating Committee is made up of the following members:

- *Manitoba Agriculture and Food*
- *Manitoba Cattle Producers Association*
- *Agriculture and Agri-Food Canada*
- *Cargill Ltd.*
- *Heartland Livestock Services*
- *International Beef Genetics*
- *Toronto Dominion Bank*
- *University of Manitoba*

As well, many other individuals contributed to specific components of the document.


WINNIPEG
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Manitoba Beef Prospects: A Positive Outlook

The beef industry in Manitoba offers exciting opportunities for growth, now and in the future.

Evaluating North American and World Markets

Consumers at home and abroad are continuing to buy red meat to add nutrition, exceptional taste and value to their meals.

The United States Department of Agriculture reported that beef consumption among selected countries was 48.6 million tonnes in 1998. This figure was estimated at 49.2 million tonnes for 1999 and was projected to increase slightly to 49.3 million tonnes for 2000. These figures seem to bear out the US National Cattlemen's Association's claims that, for the first time in twenty years, beef demand was stable.

Argentina is the world leader in beef consumption (figure 1). Consumption was 64 kg/person in 1998, rose to an estimated 70.2 kg/person in 1999 and will trail down slightly to 65.4 kg/person in 2000. At the other end of the scale is China with consumption at 3.8 kg/person in 1998, 4.1 in 1999 and 4.3 projected in 2000.

Consumption of beef in Canada and the US increased from 13.0 million tonnes in 1998 to 13.4 million tonnes in 1999 and is projected to remain at 1999 levels for the foreseeable future.

Canada's share of world beef production grew from 1.9 per cent in 1995 to 2.5 per cent in 1999 and is projected to be 2.6 per cent in 2000. Forecasts were that the Canadian share would remain at similar levels well beyond 2000. Canadian production has increased in terms of absolute tonnage from 928,000 tonnes in 1995 to 1,225,000 tonnes in 1999. The projected total for 2000 is 1,240,000 tonnes.

Per Capita Consumption of Beef & Veal (kg/person)

Country	1995	1996	1997	1998	1999(E)	2000(P)
United States	44.6	44.8	43.9	44.6	45.3	44.9
Argentina	59.6	60.0	71.4	64.0	70.2	65.4
Brazil	36.2	36.6	35.1	34.5	32.3	32.7
Australia	36.0	39.2	42.8	38.5	40.2	35.2
Japan	12.1	11.5	11.7	11.8	11.7	11.7
Mexico	20.3	19.8	20.0	20.5	21.0	21.1
Canada	32.8	31.9	31.7	32.1	32.1	31.9
China	3.4	2.9	3.6	3.8	4.1	4.3

(E) Estimated
(P) Projected

Industry Outlook

Cattle inventories in major cattle producing countries remained relatively unchanged at 1.0 billion head. In 1999, herd expansion was notable in China, while the largest liquidations occurred in the Former Soviet Union countries, North America and the European Union (EU).

The trend in major cattle-producing countries (figure 2) suggests there will be modest inventory reductions in North America, the former Soviet Union and Europe. Beef inventories are expected to increase China.

North America and Mexico inventories are expected to continue their herd liquidation and decline from 138 million head in 1998 to between 133 to 135 million head early in the 21st century. In 2000, now in its fifth year of liquidation, the US cattle herd is expected to be 98.1 million head. The Canadian cattle herd liquidation that began in 1997 is expected to continue in 2000 although at a much slower rate than in recent years. Plagued by continuing drought in Northern Mexico, the Mexican cattle population continues to decline.

The decline in cattle numbers will lead to a decline in beef production. As the herd stabilizes in the first years of the new decade, US beef production will continue to decline. Following that, modest increases in production but lower imports will translate into declining supplies of beef with increases not expected for several more years.

Therefore, with the combination of stabilizing consumption and declining inventories in the major cattle producing countries, resulting in tightening of supplies, cattle prices will strengthen. With relatively low input costs and a central location for marketing, Manitoba cattle producers can capitalize on growth opportunities provided by a stable demand and higher prices.

Slaughter and Processing Plants Move West and South

In the late 1980s and 1990s, while Manitoba cattle production remained stable or increased slightly, inspected slaughter numbers (figure 3) decreased as new feedlots and slaughter plants were established in Alberta. Following a North American trend, aging facilities in Winnipeg and Chicago were replaced by new plants in smaller centres located closer to large feedlots. By 1994, Alberta plants accounted for nearly 70 per cent of the cattle slaughtered in Canada.

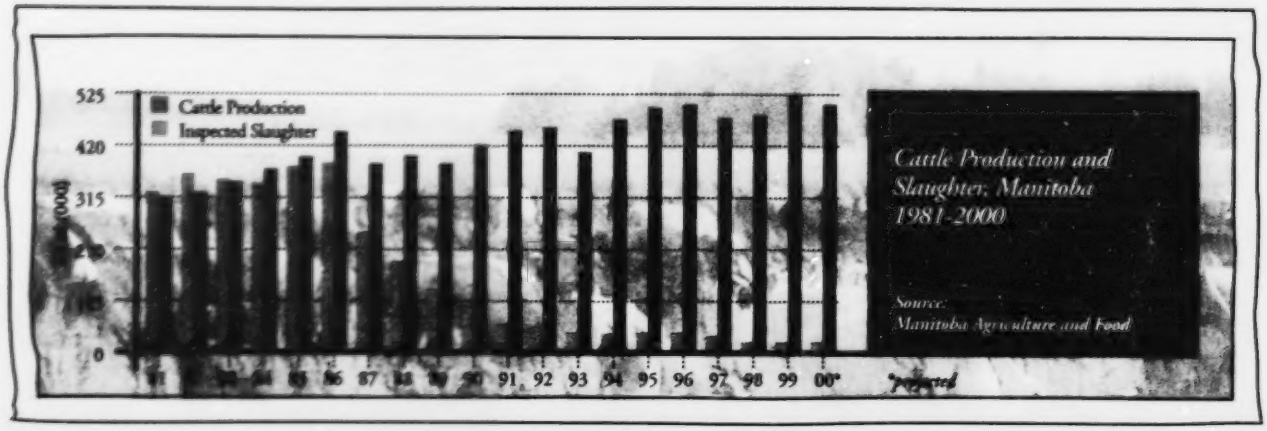
World Beef Production Inventories (million head)

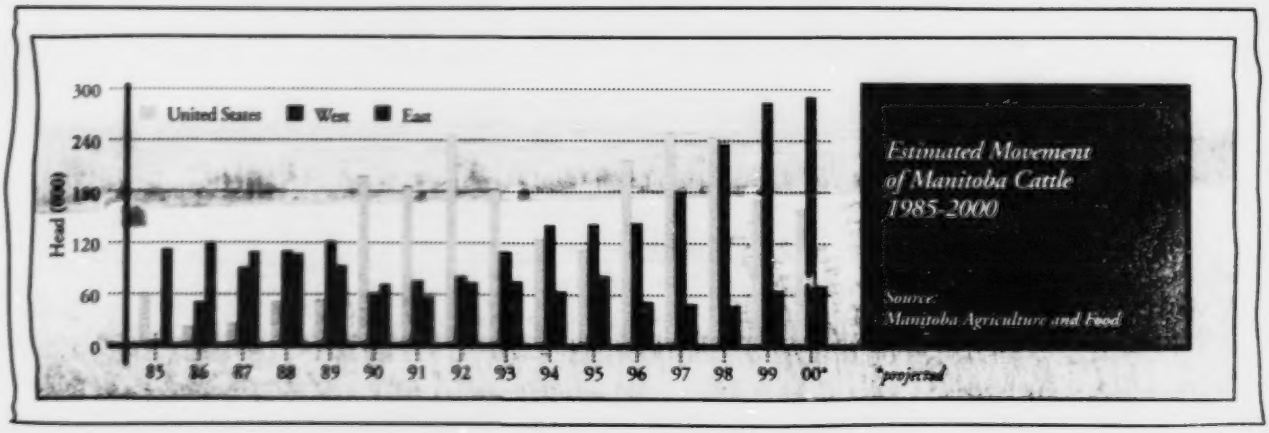
Country	1995	1996	1997	1998	1999	2000
Canada	12.7	13.4	13.4	13.2	12.8	12.7
Mexico	30.2	28.1	26.8	25.6	24.8	23.6
United States	102.8	101.4	101.6	99.7	99.1	98.1
Argentina	54.2	53.6	51.7	49.2	49.4	49.4
Brazil	149.3	149.2	146.1	144.7	143.9	143.3
European Union	78.8	79.1	78.8	77.7	77.2	76.1
China	123.3	104.0	110.3	121.8	124.4	126.0
Former Soviet Union	70.9	64.1	56.5	48.4	44.3	41.6
Japan	4.9	4.8	4.8	4.7	4.7	4.6
Australia	25.7	26.5	26.8	26.7	25.8	25.6

During the same period, Manitoba cattle began to enter the central plains region of the United States. Lower exchange rates enhanced export prices, creating a new market for beef producers. According to Manitoba Agriculture and Food, approximately 200,000 head of cattle were shipped to the US in 1990. Manitoba exports (figure 4) of live cattle and calves since then have varied between 112,000 and 250,000 head annually. In recent years exports to the US have declined to slightly over 150,000 head because of a duty imposed on slaughter and feeder cattle by the US Department of Commerce who allege that cattle were being dumped into the US market at below cost of production. The US continues to be the dominant export market, taking 90 per cent of Canadian exports of beef and almost 100 per cent of live cattle exports.

At one time, Winnipeg was the capital of the livestock industry in Canada—the central hub for marketing, slaughtering and processing beef. In 1971, Manitoba had six federally inspected plants: Canada Packers, Swifts, Burns (Winnipeg and Brandon), East-West Packers and Schneiders. According to Statistics Canada, they collectively processed about 581,000 head that year. Today, Manitoba has two federally inspected plants (Plains Processor in Elm Creek and Winkler Meats in Winkler) as well as 23 small provincially inspected abattoirs.

As Manitoba's cattle slaughter industry has declined from a peak of 581,000 head in 1976 to 19,600 head in 1999, most of the beef





cattle produced in Manitoba have to be sold out of the province. In 1999, almost 160,000 Manitoba slaughter cattle and 10,000 feeder cattle, valued at $176.8 million, were exported to the US. while a net 27,000 slaughter cattle and an estimated net 320,000 feeder cattle and calves were sold mainly to Alberta and Saskatchewan. When live animals shipped are converted to a carcass equivalent, (see figure 5 Manitoba Cattle Destination), then 47.6 % of total exports are shipped to the US.

Agriculture and Agri-Food Canada indicated that, in 1999, more than 19,000 head were slaughtered in Manitoba. Production was 13.9 million pounds (carcass weight), worth approximately $20 million. In 1999, beef products worth about $6.5 million were exported, primarily to the United States.

Contrary to popular belief, Canadians eat more beef than pork or chicken. Using boneless weights for comparison, we ate 21.4 kilograms of beef per capita in 1999 compared to 19.5 kilograms of pork and 16.2 kilograms of chicken. The beef consumption rate remained relatively stable throughout the 1990s.

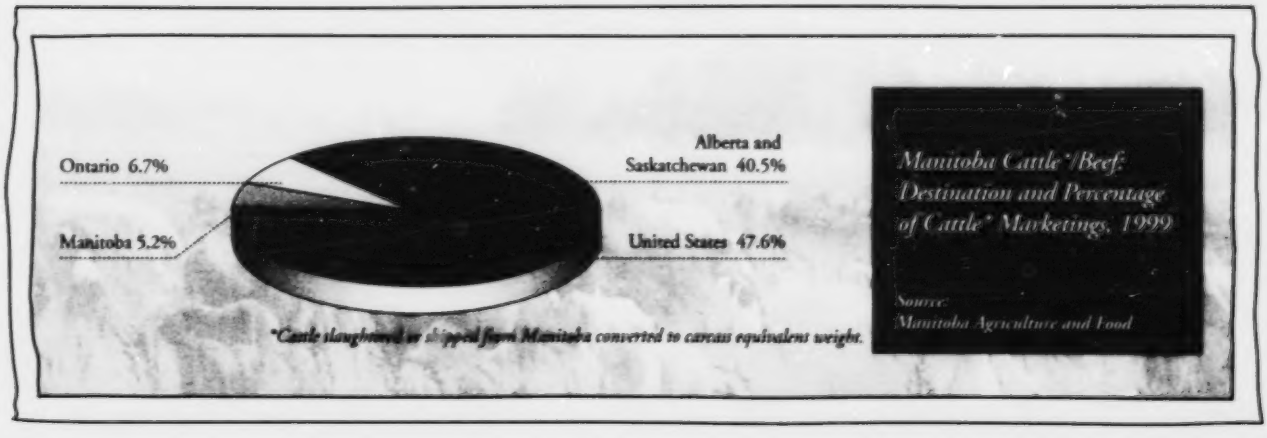
Beef Information Centre

Although Manitoba exports beef products, most of the beef consumed within the province is imported from Alberta and the US.

Analysis of Beef Production in Manitoba

The beef industry is a vital segment of Manitoba agriculture. In 1998, there were about 12,000 beef producers in Manitoba. Beef was the primary source of revenue for approximately 7,000 of these producers.

According to the latest figures available from Statistics Canada, there were approximately 1.3 million beef cattle on Manitoba farms as of July 1, 1999. About 537,000 head were marketed that year for slaughter or sale out of the province.


Ontario 6.7%
Alberta and Saskatchewan 40.5%
Manitoba 5.2%
United States 47.6%
*Cattle slaughtered or shipped from Manitoba converted to carcass equivalent weight.
Manitoba Cattle*/Beef: Destination and Percentage of Cattle* Marketings, 1999
Source: Manitoba Agriculture and Food

Manitoba is home to approximately 12,000 beef producers. The average size of the cowherd is 50 head. The average Canadian cowherd is 45 head.

Manitoba's beef herd evenly distributed

Cattle production is distributed evenly (figure 6) across southern Manitoba. Cowherds are generally located where there is feed, reflecting the fact that beef and grain are highly complementary industries.

Manitoba's beef industry can be separated into two main endeavours, the cow-calf industry and the feeding industry. Manitoba Agriculture and Food estimated that over 95 per cent of commercial beef operations are cow/calf. The remaining four to five per cent of commercial operations are feedlots, the largest of which has a capacity of 6,500 head.

Cow/calf production numbers are increasing

The cow/calf industry is dominated by a large number of small producers who start with newborn calves in the spring and wean them in the fall. Once the calves are weaned, producers either feed them on the farm or sell them as weaned calves.

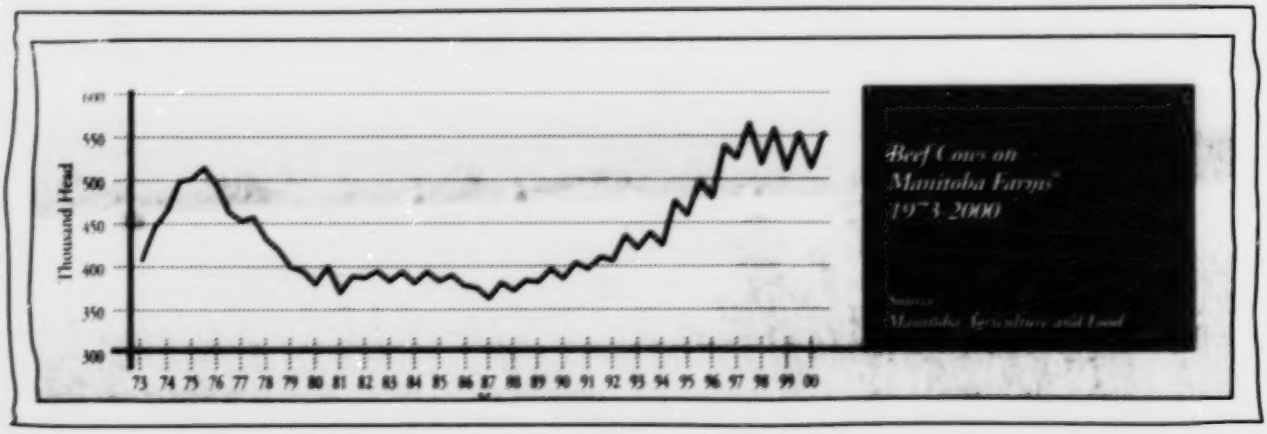
Statistics Canada figures indicate that Manitoba had Canada's third largest beef cowherd in 1999 (after Alberta and Saskatchewan) with 12.2 per cent (figure 7) of the nation's beef cows and over 1.4 per cent of the total beef cows in North America.

According to Manitoba Agriculture and Food, there have been dramatic shifts in the numbers of beef cows on farms over the past 25 years (figure 8). In 1975, Manitoba had just over 500,000 head. After the major slaughtering and processing plants moved to Alberta in the 1980s, the industry experienced a sharp decrease in cow numbers.

Following a period of decline, the Manitoba cowherd increased at an average rate of two per cent annually from 1987 until 1992. The rate of increase jumped to over six per cent annually from 1992 until 1997 when the herd reached a record level of 566,000. Manitoba's beef cowherd declined by one percent in both 1998 and 1999, the smallest decrease in Canada. The beef cowherd is presently estimated at 554,000 head.

In 1996 there were more than 1 million cattle in Manitoba, including calves, feeders and cows.

Provincial Share of Beef Cow Herd



Centrally located, Manitoba seed stock producers have selected from the best breeding stock across North America.

Total Cattle and Calves

Number of Animals – Manitoba

Size Class	1976	1981	1986	1991	1996
1-32	117,945	87,945	75,110	65,209	56,824
33-77	354,522	252,423	204,959	198,767	187,674
78-122	305,687	238,558	218,055	225,354	223,824
123-177	230,469	199,861	196,908	190,634	213,682
178-272	186,841	177,750	182,502	195,105	253,601
273-527	137,961	145,266	170,363	169,421	256,219
528-1127	41,067	53,295	53,103	52,224	112,888
1128 & over	25,385	20,868	13,720	12,066	50,450
Total	**1,399,877**	**1,175,966**	**1,114,720**	**1,108,780**	**1,355,162**
Farms reporting	20,540	15,995	13,868	12,975	12,807
Average size	**68**	**73**	**80**	**85**	**106**

Reference Census 1996

Average Cows per Farm (in Manitoba) 1999

Region	Beef Producers	Total Cows	Beef Cows Per Producer
Southwest	3,405	166,630	49
Central	2,397	106,335	44
Eastern/Interlake	2,342	98,830	42
Northwest	2,856	182,205	63
Total	11,000	554,000	50

According to Statistics Canada, the average total herd size (cows and calves) on Manitoba farms increased 56 per cent from 68 head in 1976 to 106 head in 1996 (figure 9). In 1999, the average beef cow herd (figure 10) was estimated at 50 head per farm in Manitoba.

Manitoba producers have the potential to increase the number of cattle they feed to slaughtering weight. According to Statistics Canada, less than 30 per cent of the calves produced in Manitoba were fed to slaughter weight in 1999 while the rest were sold as calves, stockers or heavy feeders.

The cow/calf business forms a large part of Manitoba's beef production industry but opportunities still exist to add further value. Producers can take advantage of high-quality forage and feed grains that are available and feed animals to heavier weights before selling them.

Feedlot numbers rebound during last decade

In Manitoba, the feeding industry is made up of backgrounding lots and finishing feedlots. Backgrounding lots feed calves forage-based rations to add size and weight. Typically, calves of 500 to 600 pounds are fed to 800 to 950 pounds at 12 to 16 months of age and sent to finishing feedlots. Finishing feedlots feed yearlings and backgrounded calves using high-energy grain rations to produce fed cattle for slaughter. Usually, cattle are ready for slaughter at 1,000 to 1,400 pounds.

The proximity of feed supplies and the amount of land available for manure disposal are primary considerations in determining whether a region will be competitive in cattle feeding. Cattle feeding will be more profitable where feed supply exceeds demand. This enables cattle feeders to buy feed grains at little or no premium over the price offered by local grain elevators.

Feedlots influence local cow/calf producers because local producers become more familiar with the type of product feedlots prefer. Higher quality, differentiated products may bring premium prices. Such specialization can also lead to improved returns for all parties in the beef marketing channel.

The Manitoba Cattle Producers Association estimates that a feedlot with 4,000-head capacity would require 570,000 bushels of barley (9,500 acres), 7,200 tons of silage (1,200 acres) and 1,700 tonnes of hay (900 acres) annually.

Manitoba producers currently finish about 160,000 animals a year.

Manitoba Agriculture and Food reports that the number of feedlots decreased from 385 in 1986 to 184 in 1991. Significant feed subsidies in Alberta during the early 1980s and 1990s contributed to this substantial decline by attracting processors to build new facilities there.

By 1998, Manitoba had rallied slightly to almost 250 commercial feedlots ranging in size from 80 to 6,500 head. Opportunities still exist to expand the number and size of feedlots in this province.

Purebred cattle production—a breed apart

Approximately 1500 purebred cattle operations in Manitoba supply breeding stock to commercial cattle producers. They concentrate on producing and marketing cattle with specific genetic traits. These traits include low birth weight, high weaning weight, high yearling weight, superior carcass composition and excellent daily weight gain.

Manitoba purebred beef breeders have a long-established reputation for producing some of the top genetics in Canada. Being located in the geographical center of North America has made it easier for them to select breeding stock from all parts of North America.

In the late 1960s, Manitoba beef breeders led some of the first exploratory missions to France and Germany to import cattle. Agriculture Canada's Brandon research station was the first North American facility to conduct a foreign breed evaluation. Manitoba was a leader in bringing exotic beef breeding stock into Canada.

During this time, the United States banned the importation of cattle from Europe. Manitoba soon became a world leader in livestock improvement. Newly introduced European breeds quickly adapted to the harsh prairie climate. The quality of their vigorous crossbred offspring has been recognized in cattle feeding circles around North America.

Rotational grazing has enabled production to increase while the land base under management has remained relatively constant. Shorter grazing periods and longer recovery times have improved the productivity of range and pastureland, while supporting larger herds.

Superior genetics produce superior results

All the major beef cattle breeds are represented in Manitoba. These breeds include Angus, Blonde d'Aquitaine, Charolais, Gelbvieh, Hereford, Limousin, Maine-Anjou, Salers, Shorthorn and Simmental.

Wide-ranging genetic stock allows commercial producers to adapt their herds to specific environmental conditions. From feeder cattle of the highest quality to sound-performing, crossbred heifers, commercial cattle in Manitoba have the breeding to convert grass and grain into dollars. Purebred beef producers, private companies and beef breed associations promote and market live cattle, semen and embryos across Canada and around the world.

Manitoba excels in genetic evaluation

Manitoba's beef industry has been involved in growth performance testing for over 30 years. It is recognized as a leader in using genetic evaluation programs to guarantee selection of the best genetic qualities in North America.

Two multi-breed, bull test stations as well as seven single-breed test stations operate in the province. In practice, these test stations are marketing centres for beef bulls. They compare bulls from many breeds and breeding operations for growth traits. About 1,500 yearlings are evaluated annually.

Private on-farm tests, such as the national Home ROP Test, also help producers evaluate their cowherds. Approximately 40 per cent of Manitoba herds are tested on the farm.

The leadership of Manitoba's purebred beef breeders, the strong support of numerous beef breed associations and the commitment of extension staff from Manitoba Agriculture and Food earn the province recognition as a world leader in cattle genetics. Manitoba's cattle and genetics are often on display at various beef shows throughout the world.

Diligence in maintaining food safety

Manitoba producers participate in several industry-wide programs that monitor herd health and ensure the quality and safety of the beef they produce for national and international markets.

Quality Starts Here (QSH) is an industry initiative operated by the Canadian On-farm Food Safety Program. It is based on the internationally recognized principles of Hazard Analysis Critical Control Point (HACCP) and controls chemical, biological and physical food safety hazards.

The National Identification Program for cattle is an industry-led program supported by government through cost sharing and regulation. This program, mandatory under the *Health of Animals Act*, requires use of approved tags that will enable inspectors to trace individual animals from the processing plant back to their herd of origin.

In 1999, provincial sales from cattle and calves accounted for a production value of $444 million.

Advances in Management Techniques and Technology

The scale of beef operations in Manitoba has changed significantly over the past 25 years due to developments in technology and livestock management techniques. The first dramatic change occurred because of improved genetics that produced larger cattle and boosted growth rates. The second substantial change was the introduction of intensively managed grazing systems and integrated resource management.

The trend toward silage use — and the improved systems now available to chop, bag, bale and store it — has also enhanced productivity. Producers are able to feed cattle high quality silage with more efficiency.

New vaccines, medicines and veterinary techniques have increased overall herd health. Natural death rates are lower, rate of gain and quality of beef have increased. Enhanced watering systems have also contributed to better herd health while reducing impacts on the environment.

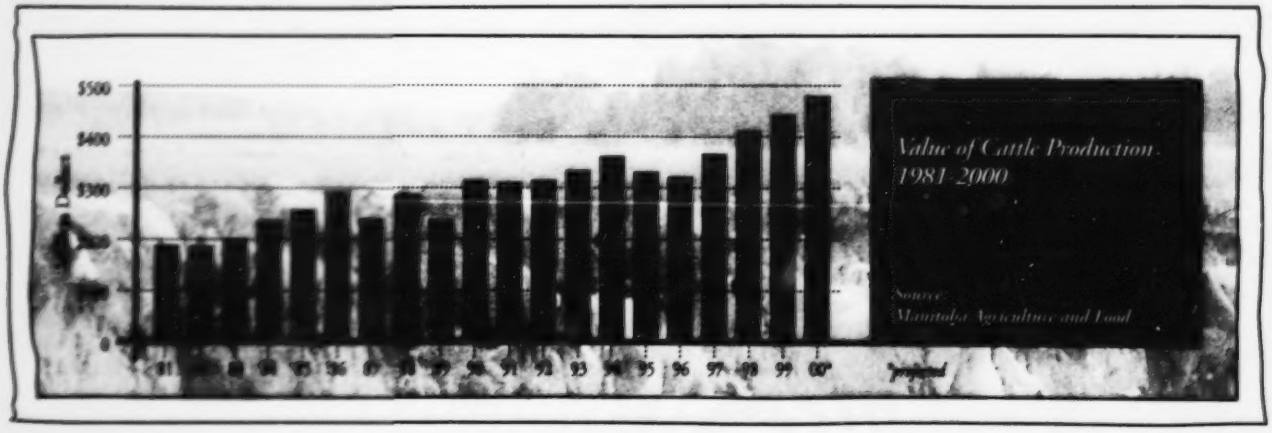
Effective fences, shelters and facilities for handling feed and water are essential to the success of a cow/calf operation. Well-constructed facilities that are adapted to the natural features of the site, easy to use and safe contribute to optimum performance of the herd.

Through better technology and management techniques, cattle operations have changed in terms of what is done and how it is done. Fewer numbers of people are managing greater numbers of cattle. They are also producing more pounds of beef with the same acres.

Beef Production Equals Profit

Manitoba Agriculture and Food states that the value of cattle produced in 1999 (figure 11), calculated to include a decrease in inventory, was $444 million, one-sixth of the total value of agricultural production in Manitoba. In 2000 the value is projected to be slightly higher.

The economic activity generated within a community by cattle operations such as cow/calf, backgrounding, stocker and feedlots is not limited to construction and annual operating budgets. As feedlot and feed production industries grow in size and sophistication, demands increase for breeding stock, veterinary services, transportation services, and slaughter and packing industry services. The result is improved profitability throughout the beef-related industry.



Generally, considerable spin-off occurs in local communities, too. People directly or indirectly employed by the beef industry spend their income in the community creating additional jobs and economic activity.

Research from Alberta has shown that one dollar of economic activity in the beef industry generates another three dollars of economic activity in the local community. A 1995 economic impact study by the Alberta Cattle Feeders Association reported that feedlots with annual volumes of 22,000 cattle injected $3.2 million into the local economy. Feedlots with annual volumes of 1,100 can contribute as much as $229,000 and three jobs to the local community.

An average 4,000-head feedlot
needs to be supported by 9,500 acres of barley,
1,200 acres of silage and 900 acres of hay
for a total of 11,600 acres of feed,
or more than 18 sections of land.

Making the Best use of Resources

Manitoba has a reputation for quality beef production.

Generations of Experience

Manitoba has a long, proud history of raising and producing cattle. Spanning nearly two centuries, the industry mirrors the skill and proficiency learned from the ground up, and passed down from parent to child, from generation to generation. Families that raise cattle know the kind of commitment it takes to remain successful in an ever-changing industry, continually challenged by a variable climate, different soil conditions and advancing technology.

These dedicated men and women work to ensure a sustainable future for Manitoba's cattle producing industry. They spend years perpetuating a way of life that commands education, insight, tradition and respect.

Their rewards are many and well-deserved.

Abundant Resources

Our province produces abundant high-quality feed. We also have plenty of clean water, a low-cost land base and good transportation connections to major slaughter and processing plants. Manitoba has the extensive human resources and the natural resource potential to support new opportunities and growth in the beef industry.

Farm operators not directly involved in the beef industry can take advantage of opportunities to maximize resources by supplying land for pasture, diversifying their farms with forage included in the crop rotation, and by participating in co-operative ventures such as leasing cattle and investing in construction of feedlots.

Elimination of the *Western Grain Transportation Act* subsidy has caused the exporting of quality grains to be less profitable in Manitoba. Lower returns from cereals and oilseeds have caused producers to attempt to lower their costs of production of these crops by seeking production alternatives and/or markets.

Among those alternatives being considered will be conversion of land from grain into pasture and forage production in response to increasing market revenues from the livestock sector. Livestock producers seeking additional resources (e.g. hay and pasture, water, feed grain) will enter the land market to acquire the needed resources. Family farms may also diversity into livestock with current land holdings to retain operational profitability.

Competition for land between livestock and grain operations seeking to expand their land base will be greatest in areas where livestock numbers have recently increased. The enterprise providing for the highest net returns to the land base or profitability will dictate use of the land resource.

Beef Industry Demands Skilled Labour

Skilled workers are essential in feedlots because profitable operations demand careful attention and expert management. Feedlot management affects operating costs and the quality of finished cattle. Managers with extensive experience and a proven track record contribute directly to the success of a large feedlot operation.

Some of the jobs in a large feedlot:

Management – planning and overseeing the entire operation; buying and selling cattle, feed and other inputs; supervising personnel.

Managing day-to-day operations – maintaining inventories, managing the cattle, maintaining facilities and equipment.

Administrative – personnel records, payrolls and accounting.

Cattle handling – processing cattle on arrival, checking the cattle daily, maintaining herd health, cleaning pens.

Feeding – operating and maintaining a feed mill, developing rations, delivering feed to bunks and keeping feeding records.

Labour costs are a substantial portion of the costs associated with cattle feedlots (figure 12a). Larger lots have an advantage over smaller lots because of increased mechanization, efficiency and specialization.

Labour Requirements for 1000 & 5000 head Feedlot

	1000 head		5000 head	
	Number	Cost	Number	Cost
Manager	1	$ 35,000	1	$70,000
Assistant	1	$ 17,000	1	$17,000
Cow Handler	—	—	1	$26,000
Assistant	—	—	1	$17,000
Feed Mill Operator	—	—	1	$26,000
Truck Driver	—	—	1	$17,000
Total Workers	2		6	
Total Cost		$ 52,000		$173,000
Labour Cost/Head		$ 52.00		$ 34.60

The cow calf industry is a labour intensive industry. Labour requirements vary depending on the amount of mechanization and the type of feed handling system being used. The amount of feed processed on the farm and the distance from pastures affect hauling and checking time. In a 1994 Alberta provincial cow/calf study, labour requirements were estimated to be approximately 9.78 hours per cow based on an average herd size of 141 cows. Figure 12b shows the breakdown in labour requirements.

New entrants to the cow calf industry need to carefully determine their labour requirements. Operations that require hired labour need to address management issues related to hiring skilled labour and providing proper training.

Labour Requirements for a Cow Calf Enterprise

Estimated Labour Required for a Cow Calf Enterprise of 141 Cows (total hours per year)

Estimated Labour Use	Hours
Making Feed	13
Feeding	356
Calving	429
Cattle Handling	83
Breeding Activities	94
Pasture Maintenance	97
Trucking/Hauling	44
Maintenance & Repairs	82
Record Keeping	181
Total Hours	1379
Average Labour Hours Required/Cow	9.78

1994 Cow Calf Study, Production Economics Branch, Alberta Agriculture

In Manitoba, 19 million acres of land are classified as agricultural. About 36 per cent of those acres are considered economically unsuitable for cultivation. However, this land does support sustained forage and livestock production.

A STRONG SUPPORT NETWORK FOR PRODUCERS

Manitoba's long history in beef production has led to the development of a strong support network. Over the years, the province has acquired the specialized services and expertise needed to maintain its reputation for quality beef production.

Extensive programs and services are available from federal and provincial levels of government, education and research facilities, industry associations and private enterprises. Some of them are listed near the end of this publication under the heading "Industry Support Sources."

LAND: A RICH, NATURAL RESOURCE

A large, affordable land base and relatively low population make Manitoba well suited to the expansion of beef operations. Much of the land in southern Manitoba (figure 13) consists of cultivated areas and native hay lands that can support an expanding livestock industry. A combination of good soil and slightly more moisture on the eastern Prairies during the growing season results in slightly higher livestock productivity than on more western Prairie lands.

LOW-COST, HIGH-QUALITY PASTURE LAND

In Manitoba, 21.3 per cent of the land base is unimproved pasture and only 4.6 per cent is improved. Crown lands make up 41.3 per cent of the unimproved pasture. Many of the unimproved pastures have limited potential for expansion. The cost of improvement in areas where land has major soil limitations is not economical considering the potential for increased productivity. These pastures are considered to be at maximum utilization, although some improvements may

be possible. Crown lands make up most of the unimproved pasture.

The success of any livestock enterprise depends on an adequate supply of low-cost, nutritious forage, particularly pasture. Well-managed pastures often produce the lowest cost gains and high net returns to the land base in the production cycle for cattle.

Three pasture options available to Manitoba producers

Native pasture – native stands are the major source of pasture for Manitoba cattlemen, making up 80 percent of the total grazing area in the province.

Tame pasture – pasture improvement offers the greatest opportunity for increasing the incomes of livestock producers. With good management, land seeded to tame pastures can be the most profitable on the farm. Productive grass-legume pastures are essential for profitable production in today's livestock economy.

Annual pasture – annual crops are often overlooked as a valuable source of feed for the pasture season. Annual crops add flexibility to a pasture program; the crop can be grazed, cut as green feed or allowed to mature for grain and straw.

Affordable rates for land leases

A survey conducted by Manitoba Agriculture and Food shows that the average rate for private pasture in 1997 was $6.73 per Animal Unit Months (AUM). In comparison, the average rental rate in Saskatchewan for private pasture was $11.37 per AUM. The Alberta average varied between $11.91 per AUM and $12.91 per AUM depending on the location. Crown land lease rates in Manitoba are lower than in Saskatchewan and are comparable to Alberta. The price gap may become smaller as the size of the beef herd in Manitoba grows and the demand for pasture increases.

The Crown Land rate is an important factor to the beef industry in Manitoba. Crown lands supply a significant amount of the available pasture in the province. Crown lands comprise close to 1.7 million acres (figure 14) (slightly more than 41 per cent) of the four million acres of unimproved land. The average parcel of land leased from the Crown is about 640 acres. The largest parcels are located in the northwest and eastern Interlake regions. Approximately 24 per cent (figure 15) of the cow/calf producers in the province have Crown land leases.

Comparison of Crown Lands as a Percentage of Total Unimproved Pasture

	Unimproved Acres	Crown Land Clients	Crown Land Acres	Acres per Farm	% of Total Unimproved
Southwest	971,744	360	66,641	185	6.9
Central	590,328	281	150,000	534	25.4
Eastern Interlake	782,845	925	561,549	607	71.7
Northwest	1,741,741	1,055	908,257	861	52.2
Total	4,086,658	2,621	1,686,447	643	41.3

Reference: Adapted from 1996 census.

Increased production of forages on marginal cropland has the potential to increase the net return to the land base.

Forage Production Maximizes Land Base

According to Statistics Canada, 36 per cent (figure 16) of the total agricultural land base in Manitoba is currently used in forage production. Yields for forage production are higher in Manitoba than in Alberta or Saskatchewan because of slightly higher precipitation levels. Manitoba produces more than enough high-quality forage to supply local beef herds, providing potential for producers in cash hay markets locally and out-of-province.

It is estimated that, with the current acreage in hay, improved pasture and unimproved pasture, Manitoba forage resources can support a beef industry totaling more than one million cows. The ability to access different feed ingredients (figure 17) for cow/calf, backgrounding and feedlot rations gives Manitoba producers an economic advantage in times of feed price fluctuations.

Land conversion to beef and forage production

Industry analysts anticipate that beef production will thrive under new conditions that developed in the 1990s. According to a study conducted by the George Morris Centre, changes to *The Western Grain Transportation Act* will make Manitoba the most competitive place to raise livestock in the country-and perhaps on the northern plains of North America.

These changes have made it more expensive to export grain from Manitoba. This is encouraging more local livestock production and the growing of feed and forages to support the beef industry. The value-added aspect of marketing forage through livestock production will likely result in additional beef cow numbers.

If cropping systems including 25 per cent annual forage crops were adopted throughout Manitoba, the province would gain almost four million acres of forage production. This increase could sustain more than 650,000 additional animals, effectively doubling the cowherd in Manitoba. The estimate is based on forage requirements of 5.8 tonnes per animal. All municipalities in southern Manitoba would experience some increase in cattle numbers, although there would be different rates of expansion depending on the forage yields.

Percentage of Beef Cow Producers who have Crown Lands 1999

	Crown Land Clients	Beef Producers	Percent of Total
Southwest	360	3,405	10.6
Central	281	2397	11.7
Eastern Interlake	925	2342	39.5
Northwest	1,055	2856	36.9
Total	2,621	11,000	23.8

If 25 per cent of current crop acres were converted from annual crops to forage production, Manitoba would have almost four million additional acres in forage production.

IDEAL CONDITIONS FOR FORAGE PRODUCTION

The soils and climate in Manitoba are ideally suited to the production of forage crops. Traditionally, forage crops have been grown on less productive cropland to support beef herds in nearby areas. Except for some parts of the Red River Valley, pasture and hay are available to livestock operations across southern Manitoba.

If forage crops were introduced into crop rotations on a 25 per cent basis (as they were 50 years ago), they would have a significant impact on the health and productivity of the soil. Forages improve soil structure through their fibrous root system, reducing soil erosion and improving the soil's water- and nutrient-holding capacity. Forage legumes in a crop rotation improve the fertility of subsequent crops and reduce weed populations.

Increased production of forages on less productive cropland will increase the net return to the land base compared to monoculture cropping systems. Continued production of forage makes better use of these less productive soils.

Manitoba Crop Production 1996 (acres)

	Tame Hay	Improved Pasture	Unimproved Pasture	Forage Seed	Annual Crops	Total Acres
Acres	1,881,237	880,295	4,086,658	61,694	12,196,647	19,106,531
% of Total	9.8%	4.6%	21.3%	0.3%	64.0%	100.0%

Reference: 1996 Census

Acres of Major Feed Grains, Tame Hay and Pasture – 1996 (000's of Acres)

	Barley	Oats	Corn	Tame Hay	Improved Pasture	Unimproved Pasture
Southwest	520	272	4	465	265	1,005
Northwest	216	164	0	435	260	1,140
Central	480	385	57	319	149	482
Eastern/Int.	341	225	6	662	206	1,460
Province	1,557	1,046	67	1,881	880	4,087

Note: Feed wheat acreage is unavailable.

Forage – Wheat Comparison Model (Soil Class C)

Assumptions: Soil Class C Forage Yield – 1.7 t/ac Wheat Yield – 34.38 bu/ac Average calf weight – 575 lbs

Wheat Price ($/bu)	Calf Price ($/lb)							
	$0.90	$0.95	$1.00	$1.05	$1.10	$1.15	$1.20	$1.25
	Net Advantage ($/acre) of Forage Over Wheat							
$3.50	$16.32	$24.51	$32.71	$40.91	49.11	$57.30	$65.50	$73.70
$3.75	$7.72	$15.92	$24.12	$32.31	$40.51	$48.71	$56.91	$65.11
$4.00	-$0.87	$7.32	$15.52	$23.72	$31.92	$40.11	$48.31	$56.51
$4.25	-$9.47	-$1.27	$6.93	$15.12	$23.32	$31.52	$39.72	$47.92
$4.50	-$18.06	-$9.87	-$1.67	$6.53	$14.73	$22.92	$31.12	$39.32
$4.75	-$26.66	-$18.46	-$10.26	-$2.07	$6.13	$14.33	$22.53	$30.73
$5.00	-$35.25	-$27.06	-$18.86	-$10.66	-$2.46	$15.73	$13.93	$22.13
$5.25	-$43.85	-$35.65	-$27.45	-$19.26	-$11.06	-$2.86	$5.34	$13.54
$5.50	-$52.44	-$44.25	-$36.05	-$27.85	-$19.65	-$11.46	-$3.26	$4.94

Example:

Beef: Cow Calf		Grain: Wheat	
Average Price ($/lb)	$1.10	Average Yield (bu/ac)	34.38
Gross Income	$632.50	Average Price ($/bu)	$3.50
Operating Expenses	$396.00	Gross Income	$120.33
Net Return/Cow Calf	$236.50	Operating Expenses	$102.00
Acres Required	3.51	Net Return/Acre	$18.33
Net Return/Acre	$67.44		

Net Advantage to Forage: $67.44 - $18.33 = $49.11/Acre

Forage Wheat Comparison Model

The Forage-Wheat Comparison Model (figure 18) developed by Manitoba Agriculture and Food compares the net advantage of growing forage over wheat on Class "C" soil. Provincial yields for forage and wheat used in the analysis were obtained from Manitoba Crop Insurance Corporation (MCIC).

The table shows the net advantage per acre, at various market prices, of growing forage and feeding it in a cow calf operation compared with growing and selling wheat. The net advantage is based on certain assumptions for the cow calf and wheat enterprises as outlined at the top of the table.

For example, at a price of $1.10 per pound for calves and $3.50 per bushel for wheat, forage would return $49.11 per acre more than wheat. At a price of $1.10 per pound for calves and $5.50 per bushel for wheat, growing wheat would be more profitable by $19.65 per acre. Moving across the table to higher prices for calves increases the advantage of growing forage over wheat. Moving down the table to higher prices for wheat decreases the advantage of growing forage over wheat. Negative numbers in the table indicate scenarios where wheat production would have the advantage.

Although the table only compares the net advantage of growing forage over wheat on Class "C" soils, the analysis on soils rated "D" to "J" indicated that the advantage was even greater.

Incorporating forage into the crop rotation provides an opportunity to increase the profitability of the farm, as the table (figure 18) indicates. In addition to adding forage to the crop mix it allows the possible integration of livestock into the farm operation diversifying the farm to make it a more economically sustainable unit.

Manitoba is recognized for the production of high-quality hay.

Tame Hay Production Increases

According to Statistics Canada, tame hay acreage in Manitoba (figure 19) has increased steadily from 1982 when harvested acreage was slightly over 1.2 million acres. It is now almost 2.0 million acres. The increase corresponds to the increase in the cowherd and other livestock over the same period.

The supply of tame hay in most years is more than adequate for the present beef herd. Usually, Manitoba exports a substantial amount of good quality hay.

Integrated Crop-Livestock Operations

Optimum use of natural resources in Manitoba involves both animals and plants. Potential for the expansion of grazing lands lies in the increased use of less productive cropland as pasture. Producers who use forages in the crop rotation and harvest a portion of the forage with grazing animals can be competitive with other crop producers. Residues such as straw, chaff and forage seeds may also be used in a totally integrated system.

An Ample Supply of Quality Feed

Livestock operations, particularly those in the feeding and finishing sectors, require a good supply of feed grain. The climate in Manitoba is well suited to the production of high-quality feed such as barley, wheat, oats and corn. Barley grain and silage are the most common feeds used in Manitoba feedlots.

Usually, feedlots are located in areas close to feed production, but they are not restricted by the local supply of feed grains. Feedlot operators often acquire feed grain outside the local area or even outside the province. Alberta is a prime example. A significant amount of Alberta's feed barley comes from Saskatchewan and Manitoba. As the feedlot industry develops in Manitoba, the amount of feed grains shipped to other feeding areas will depend on supplies and transportation costs. It may become more profitable for feed producers to supply local markets first.

According to Manitoba Agriculture and Food, the barley acreage in Manitoba has fluctuated from a high of 2.3 million acres in 1981 to a low of just over (figure 20) a million acres in 1992. This trend has occurred, in part, as a response to market signals. Barley prices at the farm gate fluctuated and declined steadily during the 1980s, resulting in producers cutting back on production. During the 1990s, barley prices and production experienced an upward trend. Some of this increased demand can be attributed to an increase in pork production and the increased size of the Manitoba cattle herd.

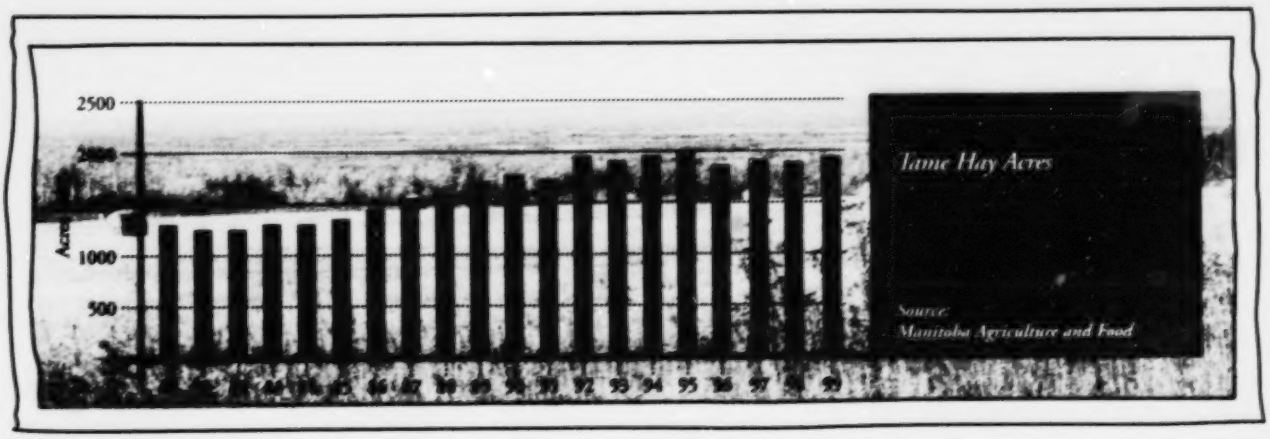
Silage production provides balanced rations

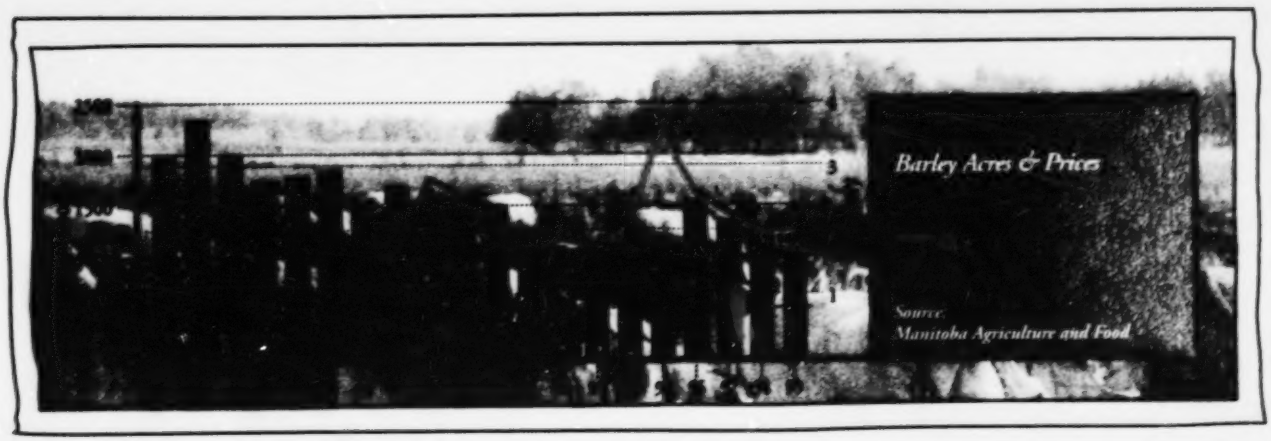
Crops harvested as silage offer the potential of higher quality feed because of lower field losses and the ability to harvest the crop at an optimum stage. Most silage crops are in a chopped form and may be mixed with other feed ingredients to prepare economical, balanced rations.

Barley silage and corn silage are the most suitable feeds for the backgrounding and finishing sectors. Barley is a principle crop in Manitoba and can be grown in all crop-producing regions. The table, Barley Grain and Silage Production, (figure 21) indicates the long-term yield by crop insurance districts.

Feeder steers require approximately six gallons (27 litres) of water a day. A 2,000-head feedlot would require about 12,000 gallons (54,000 litres) a day.

Corn is often the favored silage crop because high yields of energy (Total Digestible Nutrients or TDN) are possible from a smaller land base. Corn for silage can be grown economically in 99 per cent of the crop-producing areas in Manitoba. The decision to grow corn or barley for silage is determined by the degree of risk in the





In recent years, baled silage has become an economical option for smaller backgrounding operations where high-quality forage represents the major feed source for the livestock.

producing area, potential heat units and the cost of production. However, corn silage production may be limited to the proximity of feedlots because of its high transportation costs.

In recent years, baled silage has become an economical option for smaller backgrounding operations where high-quality forage represents the major feed source for the livestock. Both round and medium square bales of silage have been used successfully to obtain an economic performance of more than two pounds gain a day on feeder animals.

Water: An abundant natural resource

Providing water for cattle on pasture has always been a high priority for beef producers. As a rule, producers have used surface water from lakes, streams and dugouts to provide the necessary water for their herds on pasture. Extensive measures to protect riparian zones along water sources have resulted in better herd health as well as the protection of fish and wildlife habitat.

The quantity and quality of the water supply in Manitoba are unsurpassed in North America. An abundant supply of water is generally available throughout the province. A few areas may have some limitations because of water quality.

Barley Grain & Silage Productions

MCIC Risk Area	Average Barley Yield (bu)	Estimated Silage (DM lbs/Acre)
Area 1 Melita	48.6	4,665
Area 2 Boissevain	60.4	5,798
Area 3 Virden	48.4	4,646
Area 4 Brandon	55.3	5,309
Area 5 Pilot Mound	68.0	6,528
Area 6 Minnedosa	60.3	5,789
Area 7 Shoal Lake	60.4	5,798
Area 8 Swan River	45.2	4,339
Area 9 Dauphin	53.5	5,136
Area 10 Gladstone	53.4	5,126
Area 11 Portage la Prairie	63.4	6,086
Area 12 Red River Valley	61.7	5,923
Area 14 Piney-Lac du Bonnet	49.6	4,761
Area 15 N. Interlake area	58.6	5,625

NOTE: It is estimated that grain yield is 50 per cent of the total Dry Matter (DM) production. Forage production figures are based on grain yield. The assumption is that forage production will be double that of grain.

Manure a natural source of soil nutrients

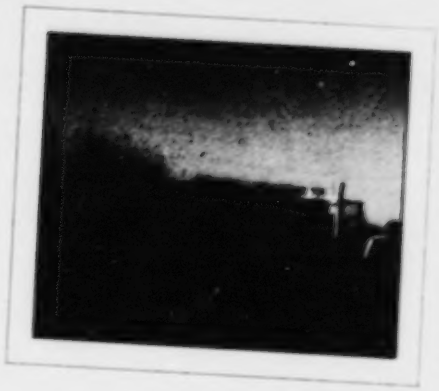
A sustainable crop-livestock system must recycle nutrients efficiently in an environmentally friendly manner. Manitoba's large land base can use livestock manure safely and efficiently. Forage land offers opportunities for using manure as it can be applied at various times during the growing season.

Manure is a fertilizer source that offers potential for increasing the productivity of grasslands. Significant increases in forage quantity and quality are possible by using manure on both improved and unimproved hay and pasture lands. Manure use in cropping systems enhances soil quality, reduces weed populations and supplies essential crop nutrients.

Adequate areas of cropland in Manitoba are available near feedlots to use the nutrients from manure. The amount of land required to handle manure from a feedlot is very similar to the land required to supply barley silage to a feedlot. Recycling manure on land that produces barley silage is a viable management tool. Manitoba Agriculture and Food recommends the following land requirements for manure spreading:

- 1.5 sections for a 5,000-head feedlot
- 5.5 sections for a 20,000-head feedlot.

Rules and regulations are in place to ensure that livestock expansion can occur while respecting the quality of life of all Manitobans.



Climate conducive to cattle production

The variable climate in Manitoba is beneficial to livestock production. The cool, dry winter climate minimizes the effects of infectious diseases, parasites and insects compared to other cattle-producing areas.

The Canadian prairie region is considered to be transitional between the boreal forest to the north and the grasslands to the south. The ecosystem is not homogeneous from east to west across the Prairie provinces. In eastern Manitoba, the mean annual precipitation ranges from 400 mm to 500 mm. At the western edge of the Prairies, mean annual precipitation ranges from 250 mm to 350 mm. Manitoba forage yields are higher as a result.

Building a Sustainable Beef Industry

The economic sustainability of the beef industry is a result of many factors including relatively low feed costs, increased demand from US processing plants and shipping advantages from a central location.

Competitive returns on investment

One important reason for the expansion of the beef cowherd in Manitoba has been the good rates of return on investment capital or assets. Return on investment (ROI) is a measure of profitability compared to the size of the business or the value of resources used to generate revenue. The rate of return on investment can be calculated as a percentage and compared to other investment opportunities.

Cow/calf ROI equals Canada Savings Bond returns

The table, Cow/Calf Production Costs and Returns (figure 22), calculates returns on investment in the cow/calf sector from 1985 to 1998. It shows the historical returns on assets for the past 14 years for a typical cow/calf operation in Manitoba.

The analysis involves two components: revenues and costs. The total income was calculated from the sale of feeder calves sold in November at an average heifer and steer weight of 575 pounds. Total cost consists of all operating costs including feed, fuel, repairs, supplies, replacement costs and depreciation on equipment. The model assumes a 90 per cent calf crop. Net income is total income minus total cost. The percentage return on investment was calculated by dividing the net income by the investment per cow. The investment was $2,545 per cow and includes cow and bull values, machinery and facility costs, and pastureland.

A typical beef cycle runs from 10 to 12 years, consisting of five years of expansion, three years of liquidation and two years of consolidation.

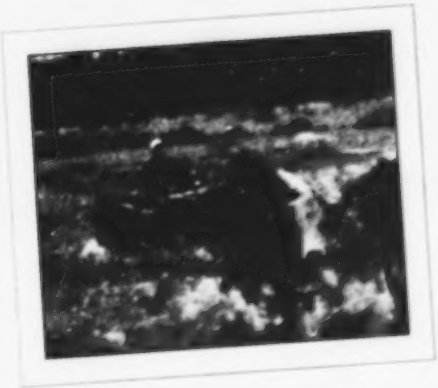
The average net income for a typical cow/calf operation in Manitoba over the 14-year period was $184 a head. The return on investment averaged 7.2 per cent. It ranged from a high of 12.9 per cent in 1993 (when calf prices were at their highest) to a low of 0.9 per cent in 1996 (when calf prices were at their lowest).

New entrants to the cow/calf industry must assess the profitability, cash flow and marketing implications of their proposed operation before investing. For enterprises to be profitable, individual producers need to:

- maintain a high fertility herd
- control fixed costs
- reduce winter feeding costs

Higher but variable ROI results for feedlots

A similar analysis was conducted at the same time on Manitoba feedlots to determine the profit/loss status of the industry. The analysis assumed that feeders were purchased in November at an average weight of 575 pounds and were sold the following June when they were approximately 1,400 pounds (shrunk weight 1,316 pounds). The average investment in facilities was $207 per head. The table, Feedlot Production Costs and Returns (figure 23), shows the profit/loss for feeding and finishing cattle in Manitoba.



Key marketing decisions for cow/calf producers are:

- the type of calves to produce for market
- whether to market cattle as calves, feeders or finished cattle
- how to market the cattle.

While the cow/calf sector had a return of $184 per head (a 7.2 per cent return on investment), feedlots in Manitoba had a return of $25 per head (a 12.0 per cent return on investment). The higher return on investment reflects the greater risk in the feeding industry.

While the cow/calf industry showed positive, but modest, returns during this period, feedlot profits varied greatly. Profits ranged from a high

Cow/Calf Production Costs & Returns

Year	Market Price $/cwt	Total Income $/head	Total Cost $/head	Net Income $/head	Percent Return
1985	$90.16	$518	$372	$146	5.7%
1986	$95.90	$551	$414	$137	5.4%
1987	$115.74	$666	$340	$326	12.8%
1988	$111.08	$639	$466	$173	6.8%
1989	$108.20	$622	$542	$80	3.1%
1990	$110.18	$634	$468	$166	6.5%
1991	$108.29	$623	$369	$254	10.0%
1992	$108.49	$624	$364	$260	10.2%
1993	$129.39	$744	$415	$329	12.9%
1994	$116.22	$668	$407	$261	10.3%
1995	$99.58	$573	$463	$110	4.3%
1996	$86.78	$499	$475	$24	0.9%
1997	$114.16	$656	$511	$145	5.8%
1998	$115.53	$664	$486	$178	6.9%
Average	$107.84	$620	$435	$184	7.2%

of $231 per head in 1992 to a loss of $82 per head in 1993. During this 14-year period, profits were recorded in eight years, while losses were recorded in six years.

Analysis of CANFAX monthly budgets for cattle indicates that profitability in cattle feeding is of an irregular nature. Over the past 20 years, feedlots across Western Canada exhibited the same variable profitability, with the average profit being about $18 per head. The Manitoba average was $25 per head.

At least one half of the calves produced in Canada each year are backgrounded before they start on a high-energy feedlot finishing program.

The higher figure in Manitoba can be attributed, in part, to the relative size of the industry. Smaller feedlots may have higher returns on a per-head basis, but larger feedlots have a greater total income because they handle larger volumes.

Backgrounding May Have Profit Potential

The table, Backgrounding Production Costs and Returns (figure 24), shows the profitability (net income) and return on invested capital in the backgrounding sector

Feedlot Production Costs & Returns

Year	Market Price $/cwt	Total Income $/head	Feeder Cost $/head	Feed Cost $/head	Other Costs $/head	Net Income $/head	Percent Return
1985	$75.28	$991	$530	$269	$166	$26	12.6%
1986	$91.41	$1,203	$563	$248	$168	$224	108.2%
1987	$83.14	$1,094	$677	$230	$180	$7	3.5%
1988	$83.52	$1,099	$650	$333	$177	-$61	-29.6%
1989	$86.93	$1,144	$634	$315	$186	$9	4.7%
1990	$82.08	$1,080	$646	$267	$201	-$34	-16.2%
1991	$85.52	$1,125	$636	$221	$179	$89	43.5%
1992	$95.07	$1,251	$637	$222	$161	$231	112%
1993	$84.36	$1,110	$757	$258	$177	-$82	-39.7%
1994	$84.78	$1,116	$681	$265	$173	-$3	-1.7%
1995	$81.06	$1,067	$586	$363	$180	-$62	-29.7%
1996	$86.46	$1,138	$512	$441	$170	$15	7.4%
1997	$90.35	$1,189	$669	$359	$180	-$19	-9.5%
1998	$90.11	$1,186	$703	$301	$177	$6	2.7%
Average	$85.71	$1,128	$634	$292	$177	$25	12.0%

over the past 14 years, assuming an investment of $207 per head. It also assumes that feeder cattle were purchased at 575 pounds in November and sold the following April at 900 pounds.

Net income per head varied from a high of $111 in 1992 to a low of -$127 in 1995 when the price was at its lowest at $70 per cwt. The average for the period was $16 per head. The return on investment averaged 7.7 per cent, which was higher than the average for savings bonds over the same period and higher than the three to four per cent average for agriculture in general.

Competitive Cost of Production

Cost of production for the livestock sector is important in determining the competitiveness of the industry. With the elimination of the *Western Grain Transportation Act*, industry analysts anticipate there will be more opportunities for cattle production in Manitoba. Feed grain prices should be comparatively lower in Manitoba and less productive croplands presently used for field crop production will be converted to other uses such as pasture and forage production. These two factors should provide the cattle industry with a good supply of competitively priced feed relative to Saskatchewan and Alberta, fostering the expansion of the cowherd and increasing the numbers of cattle on feed in Manitoba.

Figure 2
Backgrounding Production Costs & Returns

Year	Market Price $/cwt	Total Income $/head	Feeder Cost $/head	Feed Cost $/head	Other Costs $/head	Net Income $/head	Percent Return
1985	$77	$662	$518	$61	$87	-$4	-2.2%
1986	$90	$779	$551	$58	$92	$77	37.2%
1987	$97	$837	$665	$56	$89	$26	12.7%
1988	$91	$785	$639	$79	$88	-$21	-10.2%
1989	$87	$753	$622	$76	$95	-$41	-19.6%
1990	$94	$810	$633	$63	$98	$15	7.5%
1991	$86	$741	$623	$50	$89	-$21	-10.0%
1992	$100	$866	$624	$50	$82	$111	53.4%
1993	$106	$919	$744	$57	$86	$32	15.3%
1994	$93	$805	$668	$57	$84	-$4	-2.2%
1995	$70	$602	$573	$73	$83	-$127	-61.2%
1996	$88	$764	$499	$86	$81	$99	47.8%
1997	$100	$862	$656	$72	$85	$49	23.9%
1998	$98	$842	$664	$75	$83	$20	9.7%
Average	$91	$787	$619	$65	$87	$16	7.7%

Comparison of Manitoba & Alberta Feed Barley Prices

Year	Alberta[1]		Manitoba[2]		Manitoba Advantage over Alberta	
	$/tonne	$/bus	$/tonne	$/bus	$/tonne	$/bus
1990	$96	$2.09	$87	$1.89	$9	$.20
1991	$77	$1.68	$74	$1.61	$3	$.07
1992	$82	$1.79	$75	$1.63	$7	$.16
1993	$80	$1.74	$74	$1.61	$6	$.13
1994	$95	$2.07	$77	$1.68	$18	$.39
1995	$135	$2.94	$113	$2.46	$22	$.48
1996	$159	$3.46	$140	$3.05	$19	$.41
1997	$132	$2.87	$100	$2.18	$32	$.69
1998	$133	$2.90	$90	$1.96	$43	$.94
1999	$112	$2.44	$85	$1.85	$27	$.59

[1] Alberta Prices: Lethbridge Feedmill Bid Price

[2] Manitoba Prices: Combined average from elevator and feedmills.

The Comparison of Manitoba and Alberta Feed Barley Prices (figure 25), illustrates the change in feed barley prices because of the elimination of the WGTA for shipping points in Manitoba and Alberta.

Cattle Feeding Cheaper in Manitoba

The price spread between Manitoba and Alberta exists primarily because of the transportation costs of shipping barley. Shipping costs may vary from different locations in Manitoba; however, the average shipping cost by truck was approximately $28 per tonne or $0.61 per bushel in 1999.

Shipping costs are not the only factor influencing this price difference. An underlying factor contributing to the price spread will be the relative impact of local demand for feed in each province. If local demand pushes the price of barley higher compared to prices in Alberta, the price spread will drop below the present $0.70 per bushel difference which is the average for the past 3 years. Conversely, if demand increases in Alberta, the price spread will increase.

Four Phases of the Cattle Cycle

Profit Trends by Industry Segment

	Cow/Calf	Stocker	Feedlot
1. Up Cycle	Significant Profits	Moderate Profits	Moderate Profit
2. Downward Transition	Declining Profitability	Significant Losses	Significant Losses
3. Down Cycle	Significant Losses	Narrow/Neg. Margins	Narrow/Neg. Margins
4. Upward Transition	Improving Profitability	Significant Profits	Significant Profits

Source: Chicago Mercantile Exchange

Under the assumption that Manitoba has approximately a $0.70 per bushel advantage in feed costs, a feed advantage of $63 per head would be realized based on feeding 90 bushels of barley per head. This assumes feed efficiencies are the same in each province. The feed advantage is diminished when

shrinkage and freight-to-market costs are considered. Lower feed prices should enhance the position of Manitoba feeders compared to cattle from other areas.

Manitoba has significant advantages in terms of both feed supply and feed costs based on the 1998 George Morris Institute study, Prospects for Hog Production and Processing in Manitoba. While the study focuses specifically on pork, the same principles can be applied to the beef industry since grain rations play a significant role in livestock production.

Many Marketing Alternatives Are Available

Because of our central location, Manitoba beef producers are able to take advantage of alternative markets (figure 26) by choosing the one that offers the highest prices.

The most common options for marketing cattle include:

Direct Sale – A direct sale occurs when the owner sells directly to a buyer. There are two types of buyers: a dealer and a feedlot. The owner accepts bids from a dealer or a feedlot owner.

Auction Mart – The most common option is the Livestock Auction Market. This is a centrally located facility where beef producers take their cattle to be sold. Order buyers representing feedlots and packing plants from across Canada and the United States are on hand to buy

Marketing is more than selling. To a livestock producer, marketing is the entire planning process required to produce, promote and price the product.

the cattle. The cattle are sold by auction to the highest bidder. At present, Manitoba has 16 auction markets that sell half a million head of cattle each year.

T.E.A.M. (The Electronic Auction Mart) – Computer sales of feeder cattle are listed at least one week before the sale. All feeder cattle sales are basis the farm. T.E.A.M. sales operate on the same principle as a regular auction mart, but, instead of bidding on animals in a ring, buyers bid on lots described on computer. The advantage of T.E.A.M. sales is reduced stress and shrinkage. The disadvantage is the limitation of one producer having load-size lots of the same sex and size of cattle.

Video Sales – Cattle are sold by public auction via satellite television that broadcasts videotaped images of the animals on the producers' farms. Producers pay an up-front fee for videotaping and the rest of the commission if the cattle are sold. Buyers participate in the sale by telephone or computer. Usually, video sales are held by auction marts.

Presort Sale – Cattle from different producers are grouped into lots by sex, weight, type and condition. Cattle are weighed coming into the lot, less an estimate or pencil shrink, depending on the distance to sale.

Forward Contract – Cattle are presold for a determined price and are delivered to the buyer. The animals are paid for at a future date when they reach a specific weight. Contracts oblige all parties to act according to legal standards. It is important that producers understand all the terms and conditions of the contract before signing.

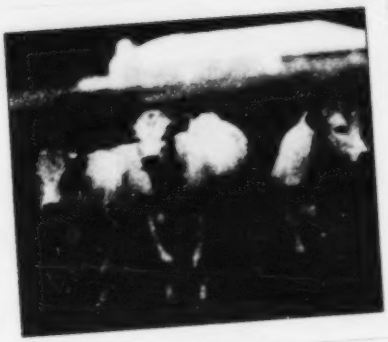
Custom Feedlot – Producers retain ownership of the animals, but pay a fee to a feedlot for feeding the cattle. Different types of fees apply such as cost per pound of gain, cost per day, veterinarian fees and the costs of medicine.

Rail Grade – This option is usually a private treaty sale. Cattle are slaughtered and the carcasses are graded for quality and priced according to the different grades. The producer sells directly to the packer and is paid according to the weight and grade of the carcass.

Buying Station – Livestock are purchased from producers at a central location. The producer delivers the livestock that are weighed on a government-inspected scale.

Marketing Alternatives – Summary

Animal Type	Period Sold	Buyers	Marketing Method
1. Weaned Calves			
Large frame exotic cross 6-7 months old 600-700 lbs	Early fall late Aug/Sept	finishing feedlots primarily Alberta	auction mart direct sale buying station
Exotic cross 6-7 months old 500-600 lbs	Fall late Sept-Oct	backgrounding lots for finishing	auction mart direct sale buying station
British or cross heifers 5-6 months old 350-500 lbs	Fall late Oct-Nov	backgrounding lots for finishing	auction mart direct sale buying station
2. Backgrounders			
Exotic cross 10-12 months old 800-900 lbs	Feb/Mar/Apr	Ontario feedlots Alberta feedlots US feedlots Manitoba feedlots	auction mart direct sale custom feedlot
British or exotic x-heifers 9-11 months 600-700 lbs	Mar/Apr/May	Grass cattle operations Manitoba, Ontario, and US	auction mart contract cattle custom feedlot
3. Finished Cattle			
Exotic cattle 12-14 months old	Mar/Apr	US Alberta & Ontario packing plants	auction mart direct sale T.E.A.M.
Exotic cross 14-18 months old	May to Aug	Ontario US packing plants	direct sale buying station T.E.A.M.
British or exotic x-heifers	Dec to Feb	US packing plants	direct sale buying station
Breeding stock cows/bulls	fall/spring	Producers brokers	direct sale auction mart
Culled cows/bulls	fall/spring	US packing plants Sask & Alberta	direct sale buying station auction mart



There are two concepts in beef marketing. One is to do it yourself (direct sale). The other is to pay a commission to have someone do it for you.

Marketing options, continued

The animals are usually subject to a pencil shrink. The buying station then offers the producer a price per pound, which can be accepted or rejected. Prices are based on current market conditions. However, since there is no buyer competition, the prices may not reflect the correct market price. The buying station then sells the cattle to a feedlot or packing plant after marking them up in price or charging the buyer a commission.

Livestock Broker – Brokers buy or sell livestock on behalf of someone. For example, if a producer has a load of fat cattle for processing, a broker will try to get the best bid from different plants. If the seller agrees to sell the cattle at the bid price, the broker arranges details such as trucking, manifests and customs papers. The payment from the plant goes to the broker who retains a fee (usually a dollar rate per head) and pays the producer the balance.

Cattle Slaughter Plants

Name	Location	Cattle Type	Capacity head/day
Ontario			
Better Beef*	Guelph, ON	steers & heifers	1500
St. Helen's*	Toronto, ON	steers & heifers	700
MGI*	Kitchener, ON	all classes	900
Western Canada			
Western Canada Beef*	Moose Jaw, SK	all classes	600
IBP*	Brooks, AB	all classes	1800
Cargill*	High River, AB	steers & heifers	2400
XL*	Calgary, AB	steers & heifers	600
USA			
IBP	Dakota City, NB	steers & heifers	6000
Montford	Grand Island, NB	steers & heifers	3500
Excell	Skyler, NB	steers & heifers	3000
Nebraska Beef	Omaha, NB	steers & heifers	700
Green Bay Dressed	Parkland, MN	cows & holsteins	1500
Long Prairie	Long Prairie, MN	cows & bulls	1000
Buffalo Lake	Buffalo Lake, MN	cows	350
Federal Beef	Rapid City, SD	cows	850

* *Canadian slaughter plants listed are federally inspected plants.*

Advantages of a central location

Cattle buyers from Alberta to Quebec and Minnesota to Nebraska frequently purchase feeders from Manitoba auction markets because of its central location. Major market centres for live cattle (figure 27) and beef products are less than 10 to 12 hours away by truck.

Competitive costs for shipping

Hauling distances are similar between Winnipeg to Dakota City, Nebraska 589 miles (948 km) and Winnipeg to High River, Alberta 780 miles (1255 km).

The tables (figures 28, 29 & 30) illustrate 1999 insurance and transportation costs from Winnipeg-important factors to consider when deciding on marketing cattle in Canada or the U.S.

Transportation Costs from Winnipeg

	Mileage (miles)	Load Weight (lbs)	$/loaded mile	$/load	$/cwt	$/head (1200 lbs)
Dakota City	589	50,000	$2.40-$2.44	$1320	$2.76	$33.12
Guelph	1,244	50,000	$2.41-$2.65	$3147	$5.72	$68.64
High River	780	50,000	$2.25-$2.40	$1809	$3.28	$39.36

Freight, brokerage, veterinary inspections, insurance, duties and other assessments are all part of the cost of cross-border shipping. Some costs, such as insurance, can vary by destination. Insurance to the US tends to be cheaper due to higher traffic volume over which the competing companies can spread their risk.

Slaughter animals require visual inspection from Agriculture and Agri-Food Canada veterinarians to determine their health status. The cattle must be ringworm and wart free. Once cleared for export, the cattle are loaded, the truck is sealed and the shipment is hauled directly to a packing plant. The cattle are then re-inspected in the plant by USDA veterinarians before slaughter.

Cattle exported from Manitoba to the United States move through the ports of Emerson/Pembina or Boissevain/Dunseith. Canada Customs requires that export permits are filled out properly and that all documents pertaining to the health of animals are complete. Export brokers are familiar with the process of marketing to the United States. Their brokerage fees are calculated using a formula that takes into account weight, duties and processing fees.

Insurance Costs

Winnipeg to	Feeder and Fat Cattle ($/head)
Dakota City	77¢/head (50¢US)
Guelph	$3.75/head
High River	$1.10/head

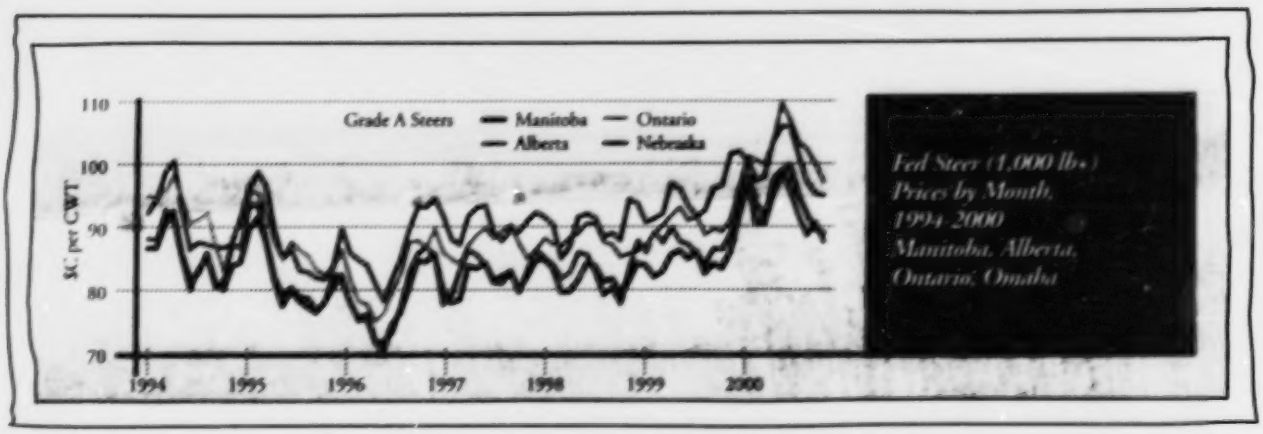
Factors to Consider When Pricing Cattle

For Canada Delivery	For US Delivery
Freight costs	Exchange rate
Off grade discounts	Freight cost
Weight discounts	Export fees
Heifer discounts	Price spread
Shrink	Shrink
Yield	Estimated carcass weight
Rail vs live price	

Increased Exports to the United States

The Canada-US Free Trade Agreement (CUSTA) has been associated with the large increase in live cattle and beef product exports to the United States. While CUSTA may be credited for making trade between the countries more favorable, that trade is dependent on a number of factors-some of which may have played a more important role.

The marketplace in the United States has a larger consumer base than Canada and a larger slaughter/processing capacity. This excess capacity results in a greater demand for beef. Combined with the low historical value of the Canadian dollar, this increased demand has resulted in high exports of Manitoba slaughter cattle to the US in recent years.



Fed Steer (1,000 lbs+) Prices by Month, 1994-2000 Manitoba, Alberta, Ontario, Omaha

The Canada – United States Grade Comparison

USDA Grade	Marbling	Canada Grade
Prime	slight-abundant	AAAA
Choice	small	AAA
Select	slight	AA
Standard	trace	A
Standard	devoid	B1
Commercial	dark cutters	B4

Market Prices in Canada and the US

From 1994 to 2000, (figure 31) prices received for fed steers sold to the Alberta market were about $1.00 per cwt. higher than prices received in Manitoba auction markets. The price spread between Omaha and Manitoba over this period was about $7.00 per cwt. Even after marketing and transportation costs were taken into consideration, the US market was still the best alternative. As a result, more cattle were marketed to the US from Manitoba during this time.

Manitoba producers selling slaughter cattle to the US market should be aware of seasonal price patterns. Slaughter steer prices increase and peak in the late winter and spring months (March to May) then decline to seasonal lows in late summer and early fall.

Grading systems in Canada and the US

Carcass grading systems (figure 32) are a means of dividing carcasses into uniform groups based on quality. It assists producers, packers, retailers and consumers in defining the product they are producing and purchasing. The system is needed because of the variation in size, breed, amount of finish, sex and age of marketed livestock — all of which affect carcass quality.

The Canadian beef grading system was privatized in 1996 and the Canadian Beef Grading Agency now provides the service. New grades have been introduced since 1992, a few grades have been discontinued and the names of some grades have been changed.

The Canadian Grading System evaluates beef on marbling and lean meat yield. Grade A (highest quality) cattle are ranked from AAAA (more marbling) to single A (less marbling) and are scored Canada #1 to Canada #3 depending on the amount of lean meat yield. Canada #1 represents the highest lean meat yield.

Beef grading in the United States also uses a dual classification system. It uses quality grades based on similar criteria to Canada's system and a yield grade that uses a similar formula to estimate lean meat yield. However, the US system grades for quality based on tenderness, juiciness and flavor while the

carcasses are graded for yield after they have been cut and trimmed.

Understanding the US grading system is one of the most difficult hurdles in exporting live cattle to the United States. Knowledge of the grading system helps Canadian producers to raise cattle with suitable levels of finish and weight to achieve the top-paying grades. The US Choice and Select grades are the most relevant to Canadian producers. These grades are recognized as equivalent to the Canadian grades AAA and AA respectively. Usually, a shipment of cattle to a US packing plant on a forward contract must contain a minimum of 70 per cent Choice graded carcasses to warrant full payment.

Factoring in exchange rates

Cattle prices in North America are determined in the futures market on the Chicago Mercantile Exchange (CME). The exchange rate between the Canadian dollar and the US dollar has a significant impact on the price of Canadian cattle (figure 33). Any change in the Canadian dollar versus the US dollar has a direct effect on Canadian beef prices.

If the Canadian dollar declines relative to the US dollar, then cattle prices in Canada increase. If the Canadian dollar rises higher relative to the US dollar, cattle prices fall lower.

Affect of Exchange Rates on Canadian Beef Price

$ US Cash ($/head)	**$816**	**$816**	**$816**	**$816**
Exchange Rate ($ Can to $ US)	**$1.54**	**$1.50**	**$1.45**	**$1.40**
$ Can Cash ($/head)	**$1,257**	**$1,224**	**$1,183**	**$1,142**
Canadian $ value in $ /lb*	**$1.05**	**$1.02**	**$0.99**	**$0.95**

** Based on 1200 lbs market weight.*

Financing a Growing Industry

There are many opportunities for growth in Manitoba's beef industry and several alternatives for financing this growth.

A number of public and private financial institutions provide debt capital for infrastructure, inventory and production financing. There are also several options for obtaining equity capital to expand or diversify an operation.

Overview of capital requirements

The beef industry is capital intensive requiring large amounts of long-term capital, short-term inventory financing and production financing. Long-term capital is required for land, infrastructure facilities, equipment and breeding stock. Short-term capital is needed for financing cattle inventory and production activities.

Most of the beef industry in Manitoba is made up of cow/calf producers who are essentially small business entrepreneurs. The capital investment in their operations is a combination of operator equity (equity provided by the individual who supplies the management and often the labor) and debt capital. In some instances, the equity may be in the form of investor equity.

The proportion of debt capital to equity capital (debt to equity ratio) is usually low, although this is rapidly changing. Smaller margins in the agricultural industry are causing beef operations to expand and grain operations to diversify into beef production.

The large amounts of capital needed to expand or diversify are greater than most producers can provide from retained earnings. As a result, other sources of capital are required. Public equity markets are not available to most producers, which leaves debt capital and private investor capital as the main sources of financing.

Analyzing debt capital requirements

As farms become larger, the financing of operating debt becomes more important in the cost of production.

The decision to provide debt capital involves an analysis of two criteria. The first is the ability of the operation to repay the funds over the term of the loan. The second is the value of the assets used to secure the loan. While most financial institutions use these standard techniques, the analysis is not precise. A number of factors are subjective and require the analyst to predict future events. Consequently, individual financial institutions may arrive at different conclusions. However, all financial institutions work within the same risk parameters.

Debt capital of a business is structured as term debt, inventory debt and production credit. Inventory financing and production credit needs are key factors in the working capital position of the operation.

Debt service coverage ratios

Usually, the ability of the business to service its debt is measured by expressing the principle and interest payments of the capital debt (excluding inventory financing and production credit) as a percentage of the profits (before interest and taxes). This calculation is known as the debt service coverage ratio. This ratio is affected by the amount of debt capital, the interest rates and

Commercial cow/calf operators generally are price takers. They produce a product and have little influence on the market price they receive for their product. To be viable, cow/calf operators must focus on the areas where they do have control. These areas include:

- achieving efficient levels of production measured by per cent calf crop, average weaning weights and fertility
- achieving a low cost of production measured by dollars per cow wintered or dollars per hundred pounds of calf weaned
- producing the type of animal that is required by the market.

As farms become larger, the financing of operating debt becomes more important in the cost of production.

the amortization rate as well as by historic or forecasted profit levels.

This percentage should be at least 1.0 measured over time. Most debt capital providers will look for a margin of safety to allow for unexpected difficulties. They will establish a minimum threshold of 125 to 130 per cent coverage (1.25 to 1.30). From the viewpoint of a debt capital provider, the larger the percentage the better.

The total level of capital debt the operation can support will be evaluated against this three- to five-year debt service capability. The capability is partly a function of the absolute levels of profit and the variability of that profit. Price levels (products and inputs), price variability (cycles and markets), production variability (weather) and management skills (production, marketing, financial) all affect the profitability of the operation.

Typical cow/calf and feedlot debt service percentages

Well-managed cow/calf operations can usually service 50 to 60 per cent debt capital. A feedlot can function with 60 to 70 per cent debt capital.

Within this framework, individual assets can be financed with greater loan-to-value ratios. The chart, General Loan-to-Value Ratios, (figure 34) identifies the ratios and amortization along with the averages.

Usually, land and infrastructure costs can be financed at a 60 to 75 per cent loan-to-value ratio amortized over 15 to 30 years, with 20 years being the norm. Buildings are financed at a 60 to 75 per cent loan-to-value ratio and generally are amortized over the useful life of the facility. The loan-to-value ratio for equipment will depend on the type of equipment, its age and how it is being used. The amortization period is a function of its expected life.

The financial community treats a breeding herd as a capital asset and the amortization schedule is based on the productive life of the animals. Often, the loan will be established with interest-only payments for the first two years to coincide with the start-up cash flow.

Herd rebuilding is a slow process. At least two years will pass between a heifer's birth and the time it gives birth to its first calf. Then it takes at least 15 months for that calf to be ready for slaughter.

General Loan-to-Value Ratios

Asset	Loan to Value Range	Average	Amortization Range	Average
Land	60-75%	65%	15-30 yrs	20 yrs
Buildings	60-75%	65%	10-20 yrs	15 yrs
Equipment	60-80%	70%	3-10 yrs	5 yrs
Breeding Cattle	60-80%	70%	5-10 yrs	7 yrs

Financial Products Available to Beef Industry in Manitoba

Source of Financing	Land	Facilities	Equipment	Breeding	Feeders	Inventory
Banks	x	x	x	x	x	x
Credit Unions	x	x	x	x	x	x
Caisse Populaires	x	x	x	x	x	x
MACC	x	x	x	x	x	
FCC	x	x	x	x		
Suppliers					x	
Equipment Dealers			x			

Inventory financing and production credit

Large sums of capital are needed within a very short period to finance inventory and support activities during the production period. Inventory financing is a major factor in the feedlot business. This is especially true when cattle are fed on single-cycle basis. Cattle are purchased on a one-time basis over a short time frame, fed to a certain weight and then sold. Generally, the entire cycle is less than one year and the feedlot is idle for the balance of the year. Then the cycle is repeated.

Several sources for debt capital

Manitoba has several financial institutions, both private and public, that provide debt capital to the beef industry. These institutions include chartered banks and trust companies, credit unions and caisse populaires, Manitoba Agricultural Credit Corporation (MACC) and the Farm Credit Corporation (FCC). Chartered banks, (figure 35), credit unions and caisse populaires finance cattle inventory and the production process. MACC will finance cattle and feeder cattle inventory, but it requires that equity participants contribute a specified level of working capital. This equity can be cash, feed supplies and receivables.

Many supply and service providers to the beef industry provide financing for feeder cattle. These firms require that the cattle be purchased and sold through them and that the equity be cash. The equity requirements are in the five to 10 per cent range.

Suppliers of goods and services provide specific credit services such as inventory finance programs. Equipment dealers offer equipment financing. The table, Financial Products Available to Beef Industry in Manitoba, (figure 35) outlines the diversity of financial products available from a variety of sources.

Most organizations identified in the table (figure 35) are staffed with knowledgeable agriculture professionals who are trained in business finance. Many have extensive networks with access to products, services and information throughout Canada, the United States, Europe and Asia.

Sources of equity capital

There are many sources of debt capital available to Manitoba producers. However, there are limited sources of equity capital beyond a producer's own resources. With very few exceptions, public equity markets are not an option. The remaining sources of equity capital are private venture investors. While these investors may come from any sector, they are usually individuals or companies that:

- view the investment as a positive spin-off of their own business
- see an opportunity to diversify in the industry at a much lower level of investment and risk than if they diversified on their own
- have a strong interest in the future success of their community
- are convinced the investment will provide an attractive rate of return compared to the risk.

One approach to attracting this type of investment involves one or two individuals initiating a small group with a common interest, be it a sense of community or a common business interest. These individuals form a company and become equity owners, each contributing equity and leveraging that equity with borrowed capital.

Lenders are willing to provide operating capital to purchase feeder cattle because the primary collateral, the cattle, are easily liquidated and their value can be determined at any given time.

The equity base often represents 30 to 40 per cent of the capital interest. The individual investors must be ready to provide additional funding should losses occur. The group may hire outside management or involve one or more individuals. The closed shareholder group does not require a security prospectus.

Equity from service providers

A variation of this approach involves a major service provider to the industry acting as the catalyst. The provider attracts investors from a community to become involved in an operation located in the area. Often the service provider is an investor in the project who provides services to the operation and usually provides the management. In this scenario, the number of investors is larger, the initial investment is lower and a security prospectus is required.

Obtaining a farm loan

Financing a farm operation has changed considerably over the past few years. At one time, the most important factor in obtaining a loan was sufficient collateral. Now agricultural lenders must ensure that the operation can repay the loan from future cash flow.

The decision to provide debt capital to an operation involves assessing its capability to:

- meet the interest payments and repay the capital over an appropriate time frame (debt service capacity or DSC), and
- provide the collateral to support the loan (securities for the loan).

Information provided to the financial institution must help to analyze these criteria. A financial history is one way to establish that the operation has been meeting its commitments and that its assets are sufficient to secure outstanding loans. This history includes a minimum of two or three complete fiscal periods. The financial history is best presented as:

- a complete statement of specific assets and liabilities,
- an accrued statement of profit and loss, and
- a statement of cash flow.

Financing a farm operation has changed considerably over the past few years. At one time, the most important factor in obtaining a loan was sufficient collateral. Now lenders must ensure that the operation can repay the loan from future cash flow.

A valuable addition to this information is a recent, professionally prepared appraisal identifying the market value of the assets. The appraisal may become an essential part of the package depending on the circumstances.

Often, the financing proposal will involve either the expansion of an existing business activity or the addition of a new activity. In either case, prior history will not be sufficient to evaluate the potential DSC of the new activity. A business plan that details the expected production, revenue and costs (operating and capital) in the form of projected cash flow, accrued profit and loss, and a balance sheet will help to evaluate the expected debt service.

Looking for a financial partner

Producers should evaluate the commitment of a proposed lender to the agricultural market. The lender should understand the marketplace and have a long history of service in the community.

The information needs of the lending institution should also be considered. The more information the lender requires, the more likely the institution is doing its job. A good lender will treat the loan as a business relationship and will want to be updated on a regular basis.

It is also important to assess the loan pricing system. Most lenders use pricing grids or scoring models that evaluate variables such as the size of the loan, servicing costs, risk and other factors. These variables can be adjusted to obtain a better rate.

Loan policy and institutional flexibility are vital factors. Producers should be aware of what will happen in a bad year. If circumstances change, specific ratios may trigger additional reporting requirements or affect cash disbursements. Information should be obtained on debt restructuring or other measures that may be needed.

The Time is Right for Beef

When all factors are considered, the opportunities for growth in Manitoba's beef industry are significant. Anticipated shortfalls in beef production in North American and around the world should continue to support prices. Manitoba producers are well positioned to take advantage of these shortfalls given their experience in producing high-quality beef and some of the best genetics on the continent.

Manitoba's natural resources are well suited to livestock production and its central location gives it a marketing advantage over the rest of the country. A broad range of programs and services provided by industry associations, government and private sector partners are ready to help producers take advantage of opportunities to diversify into forage and beef.

Industry Support Sources

Provincial Government Services

A primary goal of Manitoba Agriculture and Food is to assist Manitoba producers to remain on the leading edge of beef production technology. Government production specialists, veterinarians and farm management advisors work with producers to improve the competitiveness and profitability of the industry.

Throughout the province, government extension staff hold workshops to introduce new production technologies and practices. Many demonstration projects are conducted to show producers how different techniques and technologies will perform under local conditions. Through one-to-one consultations, local extension staff help producers deal with individual production issues.

Staff also organize producer clubs to improve productivity and farm management skills. Department staff work with the Manitoba Association of Agricultural Societies (MAAS) to support local fairs which promote and exhibit Manitoba's best new cattle breeds and innovative production techniques. Leadership development programs such as 4-H are supported to prepare future generations of agricultural producers.

Services available through Manitoba Agriculture and Food include:

- nutrition and ration formulation
- manure management
- veterinary services
- marketing information and market promotion
- beef quality improvement regulations
- record keeping
- farm safety
- housing
- breeding and genetics
- herd health
- building and handling systems
- farm management and financial planning
- crop variety selection and testing
- soil and water management
- licensing of livestock dealers
- issuing of livestock brands
- business planning
- forage and pasture management

For more information on any of these services, visit the website at www.gov.mb.ca/agriculture/

Provincial Legislation Protects and Regulates the Industry

Through legislation, the provincial government provides protection and regulation for the livestock industry and individual producers. The licensing and bonding of livestock dealers ensures prompt payment and protects producers from fraud. Manitoba Agriculture and Food administers the following Acts and Regulations:

- *The Animal Care Act*
- *The Animal Diseases Act*
- *The Animal Liability Act*
- *The Cattle Producers Association Act*
- *The Farm Practices Protection Act*

- *The Livestock and Livestock Products Act*
- *The Livestock Industry Diversification Act*
- *The Veterinary Medical Act*
- *The Veterinary Services Act*

Livestock producers are protected from nuisance legal suits by The *Farm Practices Protection Act*—as long as they follow *The Livestock Manure and Mortalities Management Regulation under the Environment Act*, and Farm Practices Guidelines. These initiatives protect the environment and the sustainability of livestock production for the future.

Management of Agricultural Crown Lands

Manitoba Agriculture and Food provides programs and services to administer agricultural Crown lands. These services include supervising leases and permits as well as supporting improvement in the productivity of Crown lands suitable for agricultural production.

Available benefits and assistance include providing pasture at cost using a formula that is reviewed in years divisible by five. Croplands are tendered to the highest bidder. Land improvements are completed at the cost of the lessee and rental rates remain unchanged for an agreed-upon number of years depending on the extent of the development.

Agricultural Crown Lands Branch
Box 1286, 36 Armitage Avenue
Minnedosa, Manitoba, R0J 1E0
Phone (204) 867-5693,
Fax (204) 867-5696

Veterinary Services/ Public Diagnostic Services

Technical and specialist services are available through a veterinary diagnostic centre operated by Manitoba Agriculture and Food. The centre uses biotechnology (DNA fingerprinting) to identify viruses and other microorganisms. This fast, efficient technology ensures quick reporting of test results at a lower cost to clients, veterinarians and livestock producers. The centre also monitors livestock, poultry and wildlife diseases to protect herds throughout the province.

Veterinary Services Branch
Main Floor, 545 University Cres.
Winnipeg MB, R3T 5S6
Phone (204) 945-7650
Fax (204) 945-8062

Marketing and Farm Business Management Branch

In cooperation with Manitoba's beef industry, Manitoba Agriculture and Food is aggressively pursuing new export markets for agricultural products. The branch is comprised of several disciplines involved in many activities related to the beef industry, they are;

Farm Management

Farm management staff support producer self-reliance by promoting practices that maximize net income through effective production, marketing, and management of human resources and finances. Resource materials are available on financial management, risk management, estate planning and agricultural assistance programs.

Manitoba Agri-Ventures Initiatives Program (MAVI)

Agri-Ventures focuses on new opportunities to achieve industry growth and business development in the agriculture and food industry.

The MAVI program provides matching grants to a maximum of $5,000 for individual ventures and $10,000 for organized commodity-based groups for business planning and market development initiatives.

Market Development and International Trade

In partnership with the industry, staff work to strengthen existing markets and develop new markets for provincially grown and processed agricultural and agri-food products in Canada, United States, European Union, Latin America and Asia

Marketing & Farm Business Management Branch
901-401 York Avenue
Winnipeg MB, R3C 0P8
Phone (204) 945-4521
Fax (204) 945-6134

Food Development Centre

Established in 1977, as part of the Manitoba Research Council, the Food Development Centre (FDC) serves the agri-food industry by providing a wide range of services in the food, feed and beverage industries.

The Centre, is fully equipped to help small and large food, beverage and animal feed businesses, processors and budding entrepreneurs who want professional help to successfully compete in the food industry. The Food Development Centre's relationship with Manitoba Agriculture and Food

provides a seamless agri-food development process to help bring an idea for a food or beverage product from research and development, through testing, labeling, packaging and marketing. Past products the centre worked on which included beef were; beef jerky, Jamaican beef patties and chili.

Food Development Centre
810 Phillips Street
P.O. Box 1240
Portage la Prairie, MB R1N 3J9
Toll-Free 1-800-870-1044
Phone (204) 239-3150
Fax (204) 239-3180

Soils and Crops Branch

Soils and Crops Branch provides a coordinated program to enhance crop development, production and use while maintaining and enhancing soil and water resources.

Field trials and investigations and distribution of resource material related to crop diversification, water management, soil management, manure management, and agricultural land utilization are major areas of activity for the branch.

For specific activities related to the livestock industry the Branch programs include in-field demonstrations and written extension information pertaining to pasture management and forage production. Areas covered include weed control, disease control, fertility and management options that influence pasture and forage yield and quality. In addition, the Branch co-ordinates testing of forage crop varieties and publishes results in Seed Manitoba. This support enhances the output and marketing capability of Manitoba's forage and livestock producers.

Soils and Crops Branch
65 – 3rd Avenue Northeast
P.O. Box 1149
Carman, MB R0G 0J0
Phone (204) 745-5663
Fax (204) 745-5690

Animal Industry Branch

The Animal Industry Branch provides technical support, specialized services and information to regional extension staff, the livestock processing industry and producers. These services are aimed at enhancing the development, productivity, diversification and skills of Manitoba's livestock producers and processors.

The branch is comprised of three sections: Livestock Development and Diversification, Food Quality and Product Development and Production Quality and Safety. All sections are engaged in extension activities through the support and operation of regional extension staff. Branch staff are responsible for the administration of the livestock dealers' and agents' licensing and bonding program. They are also involved in the administration and maintenance of a livestock brands registry.

Animal Industry Branch
204 – 545 University Crescent
Winnipeg, MB R3T 5S6
Phone (204) 945-76-90
Fax (204) 945-4327

Financing Programs for Beef Operations

Manitoba Agricultural Credit Corporation

Established in 1958, Manitoba Agricultural Credit Corporation (MACC) is a provincial Crown corporation that operates in association with Manitoba Agriculture and Food. The corporation's target clients include young, beginning and otherwise low-equity producers.

The corporation's mandate has expanded to include offering credit to producers who are diversifying their operations or looking to add value to agricultural commodities.

Currently, direct lending is available for breeding stock, feeder cattle and calves. Loan guarantee programs are available for:

- the development of feeder cattle associations
- producers who wish to diversify into cattle for the first time
- producers involved in the expansion of an already diversified operation involving cattle, such as a feedlot.

Direct Loan Program for Breeding Stock
The availability of financing for breeding stock (bred cows and heifers) dates back to 1959, the corporation's first year of operation. Breeding stock loans are now provided within the Corporation's Direct Loan Program, which was first implemented in 1978-79.

Up to 80 per cent of the market value of the breeding stock is available within the current program cap of $1,100 per head. The maximum loan is $325,000 for individual producers or $650,000 for corporations, partnerships and cooperatives. This program also offers funds to producers who are interested in raising replacement stock, using either their own or purchased heifer calves.

Young Farmer Rebate Program
The Young Farmer Rebate Program, which provides clients with up to $10,000 in interest rebates, can be applied to breeding stock loans. The loans are amortized over five years or longer with no pre-payment or early payout penalties.

MACC Stocker Loans
MACC Stocker Loans were introduced in 1975 to promote the feeding of calves locally. In recent years other classes of feeder livestock such as feeder heifers and cows and feeder bison have been added to the program.

The maximum loan available is $175,000. Approved loan amounts depend on the producer's feeding experience. Maximum amounts are available to producers who can demonstrate significant expertise and success feeding livestock.

Stocker Loans can be used to finance cattle being fed on farms as well as those placed in feedlots. Livestock to be fed off-farm must be placed in a MACC-approved feedlot. This provides producers with a diversification opportunity as well as a possible alternative market for the feed grain they produce.

Stocker Loans may cover up to 100 per cent of the financing required and offer reasonable interest rates. Loans are amortized over one year.

MACC Direct Loans for Unbred Heifers

MACC loans for unbred heifers finance up to 80 per cent of the purchase price to a maximum of $700 per head. They may be amortized over a maximum of 10 years and provide an option for an interest-only period during the first 12 months. Heifers to be financed should weigh a minimum of 450 pounds. Financing levels for unbred beef heifer loans are under constant scrutiny and will be revised depending on price fluctuations in the marketplace.

Cattle Feeder Association Loan Guarantee Program

In 1991-92, the Cattle Feeder Association Loan Guarantee Program was introduced to encourage the feeding of more cattle and calves in Manitoba and to promote the associated benefits to local communities. This program guarantees funds borrowed from participating lenders by feeder associations for the purchase of feeder cattle.

Individual association members can borrow as much as $175,000 within this program, while associations are capped at $5 million each. While most association members will have the facilities to feed cattle, up to one-third of an association's membership can feed their cattle on a custom basis.

Diversification Loan Guarantee Program

Through another type of partnership with the private sector lenders, MACC introduced the Diversification Loan Guarantee Program (DLG) in 1995-96. The aim of this program is to assist Manitoba producers in their diversification and value-added activities. All major chartered banks, credit unions and caisses populaires in Manitoba are partnering with MACC on this program.

This program's $3-million loan guarantee limit means that projects with varied financial requirements can be accommodated. The DLG was designed to provide capital requirements for cattle feedlot facilities.

MACC remains committed to the beef industry in Manitoba. With 16 field offices and six satellite locations across the province, MACC is sensitive to the financial needs of breeding stock and cattle feeding producers on a local and individual basis.

Manitoba Agricultural Credit Corporation
Unit 100-1525 1st St. S.
Brandon MB, R7A 7A1
Phone (204) 726-6850
Fax (204) 726-6849

Federal Government Services

Agriculture and Agri-Food Canada: Marketing and Industry Services Branch

The federal agriculture department provides information and programs to help the industry take advantage of trade opportunities. The Marketing and Industry Services Branch helps companies resolve market entry problems through existing trading rules or by negotiating new trade agreements. They provide:

- market information
- intelligence and analysis in areas such as market opportunities
- commodity prices and volumes
- consumer trends
- labeling requirements
- government programs
- market contacts.

This branch works with industry to develop export-marketing strategies. It also organizes seminars and meetings to encourage strategic alliances within the industry as well as the production of higher value products.

Market & Industry Services Branch
402-303 Main St.
Winnipeg MB, R3C 3G7
Phone (204) 983-3032
Fax (204) 983-4583

Canadian Food Inspection Agency (CFIA)

The purpose of the agency is to ensure that meat and poultry products leaving federally inspected establishments for inter-provincial and export trade (as well as products imported into Canada) are safe and wholesome. Other objectives are to:

- monitor labeling practices of registered and non-registered establishments to avoid fraud
- develop and deliver a grading program based on objective standards of meat quality and retail yield
- facilitate the marketing of meats from producer to the consumer.

The National Animal Health Program protects Canadian livestock and poultry from serious diseases that could restrict trade or pose a risk to human health. The importation of animals and animal products from foreign countries is controlled to reduce the risk of introducing diseases. By avoiding production losses, the stability and competitiveness of livestock and poultry production are assured. The international marketability of live animals and meat products is enhanced because of Canada's reputation for being free of certain serious diseases.

Canadian Food Inspection Agency
Mid-West Regional Office
269 Main St., Room 613
Winnipeg, Manitoba, R3C 1B2
Phone (204) 983-2200
Fax (204) 983-8022
Website: www.cfia.acia.ca

Agriculture and Agri-Food Canada: Red Meat Section

The Red Meat Section helps the Canadian red meat industry to develop and maintain export markets. It also helps the industry evaluate economic factors and opportunities to develop new products. Red meat commodities include cattle and beef, sheep and lamb, hogs and pork, fur, wild game and bison.

The section provides livestock and red meat prices, market volumes, imports and exports on a regional or national basis through weekly, monthly and annual reports. It also assists the beef industry in identifying and developing markets for breeding stock, embryos and semen.

Agricultural Industry Services Directorate
Market and Industry Services Branch
Agriculture and Agri-Food Canada
2200 Walkley Road, Ottawa,
Ontario, K1A 0C5
Phone (613) 759-6216
Fax (613) 759-6316
Email: negravep@em.agr.ca
Website:
aceis.agr.ca/misb/aisd/redmeat

Prairie Farm Rehabilitation Administration

The Prairie Farm Rehabilitation Administration (PFRA) delivers programs to help clients diversify their operations and adapt to changes in domestic and export markets. Current programs and services balance economic, environmental and social concerns to move rural areas on the Prairies towards sustainability.

To accomplish this, PFRA uses tools such as the Rural Water Development Program (RWDP), technical and advisory skills, physical resources such as the Manitoba Crop Diversification Centre and comprehensive contact information.

Prairie Farm Rehabilitation Agency
Suite 200, 303 Main St.
Winnipeg, MB R3C 3G7
Phone (204) 983-2243
Fax (204) 983-2718
Website: www.agr.ca/pfra

Private Services

A wide range of extension services is available from private companies involved in the beef industry. Manitoba feed companies provide producers with considerable input, advising on everything from veterinary medicine to optimum feed rations.

Manitoba beef producers benefit from trade shows and educational events presented by the industry. A number of beef shows and industry equipment displays take place across Manitoba each year. These events give producers a chance to learn about the latest production techniques, see new equipment and technology in action, and discuss common issues with their peers.

Veterinary Services

Veterinary services are provided by a large number of highly skilled private practitioners working in cooperation with government specialists. Some veterinarians provide consulting services throughout North America because of their exceptional level of expertise. About one-third of Manitoba producers consult veterinarians regularly regarding disease management and beef production.

Manitoba Farm Animal Council

The Manitoba Farm Animal Council has a dual role to educate the public about livestock production practices and to promote high standards of animal care among livestock producers. The organization is supported by livestock organizations and individuals involved with the industry, including livestock commodity groups, feed companies, veterinary clinics and farmers.

Manitoba Farm Animal Council
36 Scurfield Road
Winnipeg MB R3Y 1N9
Phone (204) 487-4031
Fax (204) 487-4757

Animal Nutrition Association of Canada - Manitoba Division

Members of the Manitoba Feed Industry Association have taken a lead role in the development and growth of beef production in Manitoba. The association is made up of about 70 companies that supply feeds for all classes of livestock. Some members participate in joint feedlot projects along with offering feed consulting and marketing expertise.

Animal Nutrition Association of Canada
Box 23115 McGillivary Blvd.
Winnipeg MB R3T 5S3
Phone (204) 261-7865
Fax (204) 261-6319

Keystone Agricultural Producers

Keystone Agricultural Producers (KAP), the largest general farm organization in Manitoba, is regarded as the voice of the farming community on policy issues common to all agricultural producers. KAP's vision is to be Manitoba's most effective, democratic policy voice while promoting the social, economic, physical and cultural well-being of all agricultural producers. Farmers, industry groups and rural organizations provide the funding.

Keystone Agricultural Producers
1313 Border Street
Winnipeg, MB R3H 0X4
Phone (204) 697-1140
Fax (204) 697-1109
Email: kap@mb.sympatico.ca
Website: www.kap.mb.ca

Manitoba Cattle Producers Association (MCPA)

The Manitoba Cattle Producers Association (MCPA) is a nonprofit organization that represents all beef producers in the province. The MCPA uses communication, advocacy, research and education to improve prosperity within the industry and to ensure a sustainable future.

The MCPA is funded by a provincial check-off of $2.00 (plus GST) per head that is collected on cattle sold in Manitoba. Over 14,000 members belong to MCPA. An elected board of directors who are active beef producers runs the association. MCPA has divided the province into 14 districts that elect one director to the board. There is also one position for a director at large.

The association conducts at least one annual meeting in each district as well as an annual general meeting. Resolutions are brought forward to the annual general meeting from district meetings where they are voted on by the membership. MCPA derives its policy and direction from its producer-members.

MCPA holds membership in a number of other organizations on a national and provincial level. They include the Canadian Cattlemen's Association, Beef Information Centre, Canadian Beef Export Federation, Manitoba Farm Animal Council, Keystone Agricultural Producers, Manitoba Agriculture in the Classroom and the Manitoba Forage Council.

Manitoba Cattle Producers Association
Unit 222-530 Century St.
Winnipeg MB R3H 0Y4
Phone (204) 772-4542
Fax (204) 774-3264

Bull Test Stations and Beef Cattle Performance and Evaluation Centres

At present, there are two multi-breed stations in the province (Gunton and Douglas) and various other test stations. The station at Gunton is under the direction of the Interlake Livestock and Forage Improvement Association (ILFIA) board of directors. It conducts a variety of programs designed to meet the needs of beef producers in the province.

Manitoba Beef Cattle Performance Association and Bull Test Station
Box 232
Douglas MB R0K 0R0
Phone (204) 763-4696
Fax (204) 763-4696

Canadian Beef Grading Agency

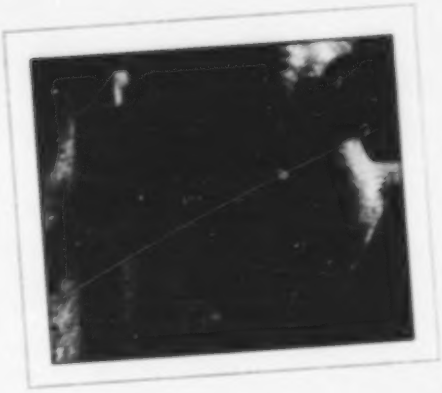
The Canadian Beef Grading Agency is a private, nonprofit corporation accredited by the Canadian Food Inspection Agency to deliver grading services for beef. The federal government sets the grade standards based on recommendations from the Industry/ Government Consultative Committee on Beef Grading.

Canadian Beef Grading Agency
#215, 6715 8th Street, N.E.
Calgary, AB T2E 7H7
Phone (403) 274-0301
Fax 1-888-582-3888
Email: cbga@telusplanet.net
Website:
www.telusplanet.net/public/cbga

Canada Beef Export Federation

The Canadian Beef Export Federation is an independent, nonprofit organization committed to improving export results for the Canadian cattle and beef industry. The federation's vision is that high-quality, Canadian beef will become the worldwide symbol of excellence.

The mission is to expand and diversify export sales and market share with sustained profit based on brand value and unique Canadian advantages. To accomplish this, the federation works cooperatively with all companies, organizations and institutions that will benefit from this effort.



The federation conducts a series of industry-wide Canadian beef promotions in each of its priority markets. Programs include seminars, industry missions, product demonstrations and trade show participation. The federation also helps exporting members develop company-specific markets and training activities.

Canadian Beef Export Federation
235, 6715 8th Street N.E.
Calgary, AB T2H 7H7
Phone (403) 274-0005
Fax (403) 274-7275
Email: canada@cbef.com
Website: www.cbef.com

CANFAX

CANFAX, a division of the Canadian Cattlemen's Association, is a nonprofit market information service. This self-help service was set up more than 25 years ago by progressive beef producers who saw a need for an unbiased system to collect, analyze and share industry information. CANFAX is the only cattle market information service in Canada that gathers and uses information supplied by its member subscribers.

CANFAX analysts gain a unique understanding of the market because of the in-depth communication maintained within the industry. CANFAX also offers the services of knowledgeable speakers who are experts in the Canadian beef industry.

CANFAX Information Services
215, 6715 8th Street N.E.
Calgary, AB T2E 7H7
Phone (403) 275-5110
Fax (403) 275-6943
Email: CANFAX@cattle.ca

Beef Information Centre

The Beef Information Centre (BIC) is a national organization formed in 1973 by Canadian beef producers. Its mandate is to increase sales of beef and beef products within Canada through advertising, promotion and consumer education. BIC implements food service promotions, retail point of sale materials, merchandising programs, nutrition information and public relations initiatives.

BIC also encourages the creation of new products. Beef producers pay a fee, called the beef check-off, when an animal is sold.

Beef Information Centre,
Manitoba Office
Suite 222, 530 Century Street
Winnipeg, MB R3H 0Y4
Phone (204) 772-4867
Fax (204) 744-3264

Canadian Beef Breeds Council

The Canadian Beef Breeds Council (CBBC) is an incorporated, non-profit organization that represents the purebred beef cattle industry on issues common to all seed stock producers. The council represents approximately 20,000 purebred beef cattle producers who annually register about 150,000 purebred beef cattle.

The CBBC has a history of developing effective policy and implementing plans on behalf of the industry. This involvement ranges from trade regulation to animal health to farm tax. Specific examples of CBBC initiatives include the formation of Bova Can Parentage Inc. and the Bovine Blood Testing Laboratory following the privatization of bovine parentage verification services.

Currently, CBBC is focusing on areas of responsibility, animal health policy, genetic improvement, international market development, education and research.

Canadian Beef Breeds Council
230, 6715 8th Street N.E.
Calgary, AB T2E 7H7
Phone (403) 730-0350
Fax (403) 275-8490
Email: cbbc@cadvision.com

Canadian Cattlemen's Association

Established in 1932, the Canadian Cattlemen's Association (CCA) is the only national association representing the interests of Canada's 100,000 beef producers. Twenty-seven producers from eight provinces comprise the CCA board of directors. The CCA provides the leadership necessary to speak as one voice for the beef industry. This includes assisting in its development, adaptation to new ideas and technologies, and its prosperity.

The CCA is structured to represent every phase of the production system, purebred, cow/calf, backgrounding and feedlot sectors. The CCA is involved in a wide range of issues concerning Canadian beef producers. These include trade, animal health, the environment, animal care, fiscal and monetary policy, grading and inspection. The CCA also works closely with other sectors of the agriculture and food industries on matters of mutual concern.

Canadian Cattlemen's Association
#215, 6715 8th Street N.E.
Calgary, AB T2E 7H7
Phone (403) 275-8558
Fax (403) 274-5686

Education and Research

University of Manitoba

A major focus of the Faculty of Agricultural and Food Sciences is diploma, undergraduate and graduate teaching. Beef production, marketing and food quality courses are available in a range of programs.

The program blends basic and applied sciences in animal production technology so graduates can respond to changes in the animal industry. Students selecting the two-year diploma program can focus on current practices and theory in livestock or crop production.

The four-year undergraduate program progresses from pure and applied sciences in the first and second years to the study of advanced animal production in the third and fourth years. The graduate program leads to Masters and Ph.D. degrees in the fields of genetics, nutrition, physiology or agricultural economics.

Well-equipped laboratories, an animal metabolic research unit and feedlot research facilities are available to conduct trials across a range of disciplines related to beef production. Research projects related to production and processing are being conducted with Agriculture and Agri-Food Canada scientists at a number of research stations across Canada.

Department of Animal Science
University of Manitoba
Winnipeg, MB R3T 2N2
Phone (204) 474-9383
Fax (204) 474-7628
Website:
www.umanitoba.ca/afs/animal_science

Agriculture & Agri-Food Canada: Brandon Research Centre

Brandon Research Centre maintains a breeding herd of 500 cows. Approximately 1,000 head are over-wintered in the facilities. The herd includes pregnant cows, steers, heifers and bulls for various research projects. The centre's land base consists of 1149 acres of improved pasture, 472 acres of unimproved pasture and about 740 acres of land for crop production.

The goal is to determine the profitability and environmental impact (e.g., manure and compost) of alternative beef production systems in the Eastern Aspen Parkland region of the Canadian Prairies. To achieve this goal, the beef research group is working with Brandon Research Centre scientists in the land resource management program, the western forage/beef group, the University of Manitoba, Manitoba Agriculture and Food, the Manitoba Cattle Producers Association and other private sector clients.

The beef research herd is distributed among several year-round management systems. Various methods for calving, winter-feeding, summer pasturing and extended grazing are used to maintain the cowherds. The calves are followed through different strategies either for feedlot and pasture finishing or for development of replacement heifers.

Brandon Research Station
18th Street North
Brandon,MB R7A 5Y3
Phone (204) 726-7650
Fax (204) 728-3858

Glossary of Terms

The following list of definitions provides a quick introduction to beef industry terminology.

Acidosis

The condition is observed from mild off-feed to chronic off-feed, lameness or even to mortalities. Also may be referred to as rumen overload, digestive upset or grain overload.

ADG

Average daily gain. The amount of gain divided by the number of days in the feeding period.

Auction Mart

The most common option for selling cattle is the Livestock Auction Market. This is a centrally located facility where beef producers take their cattle to be sold. The cattle are sold by auction to the highest bidder.

Backgrounding

Calves put on a high-forage ration to increase their weight to between 800 to 900 pounds before being placed on finishing rations.

Breakeven

The sale price ($ per cwt.) at which the owner of the cattle does not make or lose money.

Buller(s)

Steers that are ridden by other steers in the pen (as with cows or heifers that are *"bulling"*).

If problems persist, animals are usually removed from the pen to prevent bruising, injury and reduction in performance of the other cattle.

Buying Station

Livestock are purchased directly from producers at a central location. The producer delivers the livestock, which are weighed on a government-inspected scale. The animals are usually subject to a pencil shrink. The buying station offers the producer a price, which can be accepted or rejected. The buying station then sells the cattle to a feedlot or packing plant after marking up the price or charging the buyer a commission.

Chute Charges

A fee charged by some feedlots each time cattle are worked through the chute.

Close-outs

A detailed description of pen performance, feed intake, death loss, and profit or loss. A close-out is generated each time a pen of cattle is sold. Can be calculated on a *"deads-in"* or *"deads-out"* basis.

Company Cattle

Cattle that are owned and fed by the feedlot. See also Customer Cattle

Cost of Gain

Total of all feedlot-related costs (feed, yardage, processing, medicine, and death loss) divided by total gain during the feeding period. Can be calculated on a *"deads-in"* or *"deads-out"* basis.

Custom Feedyard

A feedyard that feeds, manages and markets cattle for customers. Fees are charged for materials and services.

Customer Cattle

Cattle that are owned by an investor, rancher or other client of the feedlot. They are fed and managed for a fee. See also Company Cattle

Custom Feedlot

Producers retain ownership of the animals, but pay a fee to a feedlot for feeding the cattle. Different types of fees apply, such as cost per pound of gain, cost per day, veterinarian fees and the costs of medicine.

Dark Cutter(s)

Carcasses that have muscle tissue that is dark colored rather than the desirable cherry red. Usually, they are a result of depletions in muscle glycogen stores. Dark cutters can be influenced by implant strategy, cattle handling techniques, weather and gender.

Days on Feed

The number of days the cattle are fed.

Deads-in/Deads-out

These terms refer to the methods used to calculate close-outs, costs of gain and breakeven. They can be calculated with *"deads-in"* or with *"deads-out"* of the calculations. *"Deads-in"* refers to leaving the dead cattle in the calculations, while *"deads-out"* refers to leaving the dead cattle out of the calculations.

Direct Sale

A direct sale occurs when the owner sells directly to a buyer. There are two types of buyers: a dealer and a feedlot. The owner accepts bids from a dealer or a feedlot owner.

Dressing Per Cent

Carcass weight divided by final live weight times 100.

Drunk Cattle

Cattle that are experiencing acidosis because of over-consumption or too-rapid consumption of high-energy grain diets

Dry Matter Basis

Feed that is adjusted to zero moisture to account for variation in moisture content.

Dry Rolling

Grain processing method in which grain is rolled without steaming.

Dry Supplement

Supplement that is generally in pellets and fed in a dry form in a mixed ration.

Feed Alley

The road used by the feed trucks to deliver feed to the pen.

Feed Conversion

The amount of feed consumed by an animal per unit of body weight gain. Expressed as kilogram of feed per kilogram of gain. *See also Feed Efficiency*

Feed Cost of Gain

Total feed costs divided by total pounds of gain. See also Cost of Gain

Feed Efficiency

The amount of feed consumed by an animal per unit of body weight gain. *See also Feed Conversion*

Feed Markup

The amount that the feedlot marks up the feed charges. Charges vary with each lot. Usually, feed markup charges are inversely related to the yardage charges. Charges for feed markup plus yardage are usually similar. Feed markup can be charged as a percentage of the feed bill or as a flat fee per tonne of feed.

Feeder Association

A cooperative association formed to acquire livestock for growing or finishing.

Flaker

A mill that steam flakes grain.

Forward Contract

Cattle are pre-sold for a determined price and are delivered to the buyer. The animals are paid for at a future date when they reach a specific weight. Contracts oblige all parties to act according to legal standards. It is important that producers understand all the terms and conditions of the contract before signing.

Grass Cattle

Cattle that were grown on pasture before placement in the feedlot. *See also Yearlings*

Green Cattle

Cattle that are relatively thin with only small amounts of body condition.

Grid(s)

A method of pricing slaughter cattle that offers premiums and discounts for cattle. Cattle that are leaner and have a higher-quality grade receive the premiums. Grids generally have other specifications for carcass weight and dark cutters as well.

Heiferettes

Heifers placed on feed following the loss of a calf or open heifers placed on feed following the breeding season.

Ionophore

Feed additive that enhances feed efficiency in cattle by altering ruminal fermentation. Rumensin®, monensin, Bovatec®, lasalocid, Cattlyst® and, laidlomycin propionate are the approved ionophores used in diets for finishing cattle.

Inventory Gain/Loss

The amount of gain or loss in feed inventory because of storage, milling and processing feed.

Limit Feeding

Limiting energy intake to achieve a desired rate of gain during the growing period. Used in growing and backgrounding situations to have cattle ready for market at a specific point in time. *See also Programmed Feeding*

Liquid Supplement

Liquid supplement based on molasses that contains urea. Used to provide supplemental protein in a finishing diet. May also contain supplemental calcium, phosphorus, salt, ionophores and other feed additives.

Live

Method of sale in which the cattle are sold to the packer *"live"* at the feedlot. The packer is responsible for transporting the animals to the slaughter facility.

Livestock Broker

Brokers buy or sell livestock on behalf of someone. For example, if a producer has a load of fat cattle for processing, a broker will try to get the best bid from different plants. If the seller agrees to sell the cattle at the bid price, the broker arranges details such as trucking, manifests and customs papers. The payment from the plant goes to the broker who retains a fee (usually a dollar rate per head) and pays the producer the balance.

Long Yearlings

Yearlings that have had an extended period of grazing. Usually placed on feed in the fall following a full summer grazing season. Fed for 120 days or less. *See also Short Yearlings or Yearlings*

Manitoba Livestock Manifest

A form provided by the cattle owner to the carrier, identifying livestock and establishing proof of ownership for livestock being transported. A Manitoba Livestock Manifest is available from Manitoba Agriculture and Food.

Morbidity

Refers to number of cattle, in a group that develop a clinical disease following exposure to a disease-causing agent.

Mortalities

Refers to number of cattle in a group that die from a clinical disease following exposure to a disease-causing agent.

Pay Weight

Shrunk live weight of an animal at the time of sale. Usually four per cent. *See also Pencil Shrink*

Pen Deads

Cattle that are found dead in the pen. Cause of death is usually unknown.

Pencil Shrink

An arithmetic deduction of weight from the live weight of an animal to account for fill: usually three per cent for cattle off pasture and four per cent for off-feed weights of fed cattle. *See also Pay Weight*

Presort Sale

Cattle from different producers are grouped in lots by sex, weight, type and condition. Cattle are weighed coming in, less an estimate or pencil shrink, depending on the distance to sale.

Processing

Vaccinating, treating for internal and external parasites, ear tagging and other procedures such as implanting, dehorning and castration that are done soon after cattle arrive at the feedlot.

Programmed Feeding

A feeding routine that is used to achieve a specific rate of gain. Used in growing and backgrounding situations so cattle are ready for market at a specific date. *See also Limit Feeding*

Rail Grade

This option is usually a private treaty sale. Cattle are slaughtered and the carcasses are graded for quality and priced according to the different grades. The producer sells directly to the packer and is paid according to the weight and grade of the carcass.

Registered Brand

A symbol, number or letter registered with Brand Registry, Manitoba Animal Industry Branch, for use in permanently marking animals for positive identification.

Short-Keep Cattle

Often refer to heavy feeders bought and placed on a high-energy ration; weights and days on feed (often 100 days or less) are determined by end-market requirements.

Short Yearlings

Cattle placed on feed after weaned. Usually placed on feed from March to July and fed for 120 to 160 days. *See also Yearlings or Long Yearlings*

Shrink

See Pencil Shrink or Inventory Gain/Loss

Soggy/Fleshy Cattle

Cattle that are fleshy or overly conditioned from a backgrounding or growing operation.

Stag

A term used to describe cattle that have been improperly castrated.

Steam Flaking

Grain processing method in which grain is subjected to steaming before rolling or flaking.

Step-ups

The rations used to acclimate cattle to high-energy grain diets. The length of time that cattle are fed these diets varies. Generally, the amount of concentrate is increased gradually. The first week in the feedlot, the cattle may be fed a 45 per cent roughage diet, the second week a 35 per cent roughage diet, etc., until the cattle are on the final finisher.

Surfactant

An additive used to aid in grain processing.

T.E.A.M.
(The Electronic Auction Mart)

T.E.A.M. sales operate on the same principle as a regular auction mart, but, instead of bidding on animals in a ring, buyers bid on lots described on computer. Computer sales of feeder cattle are listed at least one week before the sale. All feeder cattle sales are basis the farm.

Tempering Grain

The process of adding water to dry grain to increase moisture content to facilitate rolling of grains. *See Steam Flaking.*

Trenbolone Acetate (TBA)

Active ingredient in some implants approved for use in feedlot finishing cattle.

Video Sales

Cattle are sold by public auction via satellite television that broadcasts videotaped images of the animals on the producers' farms. Producers pay an up-front fee for videotaping and the rest of the commission if the cattle are sold. Buyers participate in the sale by telephone or computer. Usually, video sales are held by auction marts.

Warmed-Up Cattle

Cattle that have been grown in a backgrounding yard before being placed on feed.

Wet Distillers Grain

A byproduct of the dry milling (ethanol) industry. Commonly used as an ingredient in feedlots near dry milling plants. Can be produced from a variety of grains (corn, milo, barley, and wheat).

Yardage

Charges incurred each day that the cattle are in the feedlot. These charges vary depending on the lot. Usually calculated on a cents per head per day basis.

Yearlings

Cattle that are placed on feed after one year of age. Usually fed for 80 to 150 days. See also Short Yearlings or Long Yearlings